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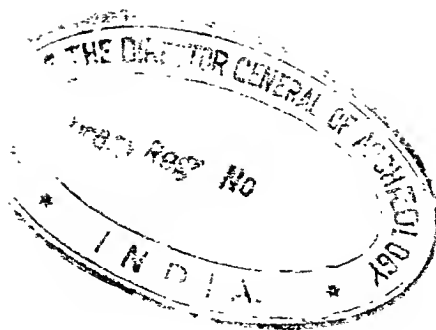
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PROCEEDINGS
OF THE
Society of Antiquaries of Scotland

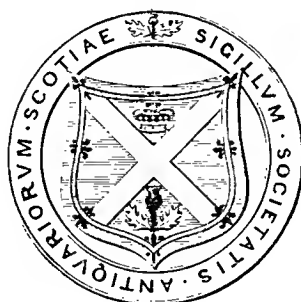




PROCEEDINGS
OF THE
Society of Antiquaries of Scotland

SESSION
MDCCCCXVI.-MDCCCCXVII.

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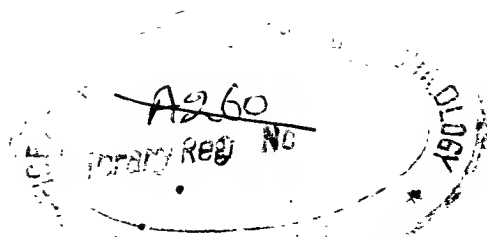
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L A W S.
OF THE
SOCIETY OF ANTIQUARIES OF SCOTLAND.

INSTITUTED NOVEMBER 1780 AND INCORPORATED BY
ROYAL CHARTER 6TH MAY 1783.

(Revised and adopted November 30, 1901.)

1. The purpose of the Society shall be the promotion of ARCHÆOLOGY, especially as connected with the investigation of the ANTIQUITIES AND HISTORY OF SCOTLAND.

2. The Society shall consist of Fellows, Honorary Fellows, Corresponding Members, and Lady Associates.

3. Candidates for admission as Fellows must sign the Form of Application prescribed by the Council, and must be proposed by a Fellow and seconded by two members of the Council. Admission shall be by ballot.

4. The Secretaries shall cause the names of the Candidates and of their Proposers to be inserted in the billet calling the Meeting at which they are to be balloted for. The Ballot may be taken for all the Candidates named in the billet at once; but if three or more black balls appear, the Chairman of the Meeting shall cause the Candidates to be balloted for singly. Any Candidate receiving less than two-thirds of the votes given shall not be admitted.

5. Honorary Fellows shall consist of persons eminent in Archæology, who must be recommended by the Council, and balloted for in the same way as Fellows; and they shall not be liable for any fees of admission or annual subscriptions. The number of Honorary Fellows shall not exceed twenty-five.

LAWS OF THE SOCIETY.

6. Corresponding Members must be recommended by the Council and balloted for in the same way as Fellows, and they shall not be liable for any fees of admission or annual subscriptions.

7. Ladies who have done valuable work in the field of Archæology may be admitted as Lady Associates. The number of Lady Associates shall not exceed twenty-five. They shall be proposed by the Council and balloted for in the same way as Fellows, and shall not be liable for any fees of admission or annual subscriptions.

8. Before the name of any person is added to the List of Fellows, such person shall pay to the funds of the Society Two Guineas as an entrance fee and One Guinea for the current year's subscription, or may compound for the entrance fee and all annual subscriptions by the payment of Twenty Guineas at the time of admission. Fellows may compound for future annual subscriptions by a single payment of Fifteen Guineas after having paid five annual subscriptions; or of Ten Guineas after having paid ten annual subscriptions.

9. The subscription of One Guinea shall become due on the 30th November in each year for the year then commencing; and if any Fellow who has not compounded shall fail to pay the subscription for three successive years, due application having been made for payment, the Treasurer shall report the same to the Council, by whose authority the name of the defaulter may be erased from the list of Fellows.

10. Every Fellow not being in arrears of the annual subscription shall be entitled to receive the printed Proceedings of the Society from the date of election.

11. None but Fellows shall vote or hold any office in the Society.

12. Subject to the Laws and to the control of the Society in General Meetings, the affairs of the Society shall be managed by a Council elected and appointed as hereinafter set forth. Five Members of the Council shall be a quorum.

13. The Office-Bearers of the Society shall consist of a President, three Vice-Presidents, two Secretaries for general purposes, two Secretaries for Foreign Correspondence, a Treasurer, two Curators of the Museum, a Curator of Coins, and a Librarian. The President shall be elected for a period of five years, and the Vice-Presidents for a period of three years.

One of the Vice-Presidents shall retire annually by rotation and shall not again be eligible for the same office until after the lapse of one year. All the other Office-Bearers shall be elected for one year and shall be eligible for re-election.

14. In accordance with the agreement subsisting between the Society and the Government, the Board of Manufactures (now the Board of Trustees) shall be represented on the Council by two of its Members (being Fellows of the Society) elected annually by the Society. The Treasury shall be represented on the Council by the King's and Lord Treasurer's Remembrancer (being a Fellow of the Society).

15. The Council shall consist of the Office-Bearers, the three representative Members above specified, and nine Fellows, elected by the Society.

16. Three of the nine elected Members of Council shall retire annually by rotation, and shall not again be eligible till after the lapse of one year. Vacancies among the elected Members of Council and Office-Bearers occurring by completion of term of office, by retirement on rotation, by resignation, by death or otherwise, shall be filled by election at the Annual General Meeting. The election shall be by Ballot, upon a list issued by the Council for that purpose to the Fellows at least fourteen days before the Meeting.

17. The Council may appoint committees or individuals to take charge of particular departments of the Society's business.

18. The Annual General Meeting of the Society shall take place on St Andrew's Day, the 30th of November, or on the following day if the 30th be a Sunday.

19. The Council shall have power to call Extraordinary General Meetings when they see cause.

20. The Ordinary Meetings of the Society shall be held on the second Monday of each month, from December to May inclusive.

21. Every proposal for altering the Laws must be made through the Council; and the Secretaries, on instructions from the Council, shall cause intimation thereof to be made to all the Fellows at least one month before the General Meeting at which it is to be determined on.

FORMS OF BEQUEST.

Form of Special Bequest.

I, A. B., do hereby leave and bequeath to the Society of Antiquaries of Scotland incorporated by Royal Charter, my collection of , and I direct that the same shall be delivered to the said Society on the receipt of the Secretary or Treasurer thereof.

General Form of Bequest.

I, A. B., do hereby leave and bequeath to the Society of Antiquaries of Scotland incorporated by Royal Charter, the sum of £ sterling [*to be used for the general purposes of the Society*] [or. *to be used for the special purpose or object, of*], and I direct that the said sum may be paid to the said Society on the receipt of the Treasurer for the time being.

LIST OF THE FELLOWS

OF THE

SOCIETY OF ANTIQUARIES OF SCOTLAND,

NOVEMBER 30, 1917.

PATRON:
HIS MAJESTY THE KING.

- | | |
|---|--|
| <p>1879. ABERCROMBY, The Right Hon. LORD. of Aboukir and Tullibody, LL.D., 62 Palmerston Place,—<i>President</i>.</p> <p>1896.*ADAM, FRANK, c/o The Straits Trading Co., Ltd., 11 Collyer Quay, Singapore.</p> <p>1899. AGNEW, Sir ANDREW N., Bart., Lochmaw Castle, Stranraer.</p> <p>1917. AGNEW, STAIR CARNEGIE, M.A., LL.B., Barrister-at-Law, 22 Buckingham Terrace.</p> <p>1892. AILSA, The Most Hon. The Marquess of, Culzean Castle, Maybole.</p> <p>1906. AITKEN, JOHN, LL.D., F.R.S., Ardenlea, Falkirk.</p> <p>1905. ALEXANDER, R. S., Grant Lodge, 18 Lomond Road, Trinity.</p> <p>1909. ALISON, JAMES PEARSON, F.R.I.B.A., Ladylaw, Hawick.</p> <p>1908. ALLINGHAM, HUGH, M.R.I.A., The Mall, Ballyshannon, Co. Donegal, Ireland.</p> <p>1907. ANDERSON, JAMES LAWSON, 45 Northumberland Street.</p> <p>1897. ANDERSON, Major JOHN HAMILTON, 2nd East Lancashire Regiment, c/o Messrs Cox & Co., 16 Charing Cross, London. S.W. 1.</p> <p>1911. ANDERSON, JOHN N., J.P., Solicitor, Stornoway.</p> <p>1902.*ANDERSON, Major ROBERT DOUGLAS, c/o The Manager, Lloyd's Bank, Paignton, Devon.</p> <p>1871.*ANDERSON, Sir ROBERT ROWAND, LL.D., H.R.S.A., Architect, 16 Rutland Square.</p> <p>1887.*ANDERSON-BERRY, DAVID, M.D., LL.D., F.R.S.E., Versailles, 19 Stanhope Road, Highgate, London, N. 6.</p> <p>1913. ANGUS, Miss MARY, Innererach, Blackness Road, Dundee.</p> | <p>1894. ANGUS, ROBERT, Ladykirk, Monkton, Ayrshire.</p> <p>1910. ANNAN, J. CRAIG, Glenbank, Lenzie.</p> <p>1900. ANSTRUTHER, Sir RALPH W., Bart., Balcaskie, Pittenweem.</p> <p>1897. ANSTRUTHER-GRAY, WILLIAM, M.P., Major, Royal Horse Guards, Kilmany, Fife.</p> <p>1914. ARMITAGE, Captain HARRY, late 15th Hussars, The Grange, North Berwick.</p> <p>1910. ARMSTRONG, A. LESLIE, 14 Swaledale Road, Millhouses, Sheffield.</p> <p>1912. ARMSTRONG, CLEMENT, Eskholm, Langholm.</p> <p>1901. ARTHUR, ALEXANDER THOMSON, M.B., C.M., Blair Devenick, Cults, Aberdeen.</p> <p>1904. ARTHUR, Sir MATTHEW, Bart., Carlung, Fullarton, Troon.</p> <p>1910. ASHER, JOHN, 1 Muirhall Terrace, Perth.</p> <p>1917.*ATHOLL, His Grace The Duke of, M.V.O., D.S.O. Blair Castle, Blair Atholl.</p> <p>1915. BAIN, GEORGE, Rosebank, Nairn.</p> <p>1891. BAIRD, WILLIAM, J.P., Clydesdale Bank, Portobello.</p> <p>1913. BAIRD, Major WILLIAM A., Lennoxlove, Haddington.</p> <p>1883. BALFOUR, CHARLES BARRINGTON, Newton Don, Kelso.</p> <p>1915. BALLANTINE, JAMES, Goodtrees, Murrayfield.</p> <p>1890. BANNERMAN, WILLIAM, M.A., M.D., West Park, 30 Polwarth Terrace.</p> <p>1897. BARCLAY-ALLARDICE, ROBERT, M.A., Polnear, Par Station, Cornwall.</p> <p>1897. BARNETT, Rev. T. RATCLIFFE, 7 Corrennie Gardens.</p> |
|---|--|

An asterisk (*) denotes Life Members who have compounded for their Annual Contributions.

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1910. BARRON, Rev. DOUGLAS GORDON, Dunottar Manse, Stonehaven.
1880. BARRON, JAMES, Editor of *Inverness Courier*, Inverness.
1909. BARTHOLOMEW, JOHN, of Glenorchard, Advocate, 56 India Street.
- 1891.*BAYNE, THOMAS, 69 West Cumberland Street, Glasgow.
- 1884.*BEATON, Capt. ANGUS J., Bayfield, North Kessock, Inverness.
1910. BEATTIE, WILLIAM JOHN, Dineiddwg, Milngavie, Stirlingshire.
1908. BELL, WAITER LEONARD, M.D., 123 London Road, Lowestoft, Suffolk.
1877. BELL, WILLIAM, 37 Melbourne Grove, Dulwich, London, S.E. 22.
- 1890.*BEVERIDGE, ERSKINE, LL.D., St Leonard's Hill, Dunfermline,—*Vice-President*.
- 1886.*BEVERIDGE, HENRY, Pitreavie House, Dunfermline.
1913. BEVERIDGE, Rev. WILLIAM, U.F. Manse, New Deer, Aberdeenshire.
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- 1877.*BILTON, LEWIS, W.S., 5 Abinger Gardens.
1891. BIRD, GEORGE, Woodlea, 109 Trinity Road.
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- 1904.*BONTEIN, JAMES SHELLEY, J.P., Glencruitten, Oban.
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1884. BOYNTON, THOMAS, Norman House, Bridlington.
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1908. BROOK, WILLIAM, 87 George Street.
1908. BROTCHE, THEODORE C. F., *Evening Times*, 65 Buchanan Street, Glasgow.
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1910. BROWN, ADAM THORBURN, Towuhan, Stow.
1902. BROWN, CHARLES, Dundas Lodge, Kerse, Falkirk.
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1884. BROWN, G. BALDWIN, M.A., Professor of Fine Art, University of Edinburgh, 25 Coates Gardens,—*Foreign Secretary*.
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1907. BRUCE, Mrs MARY DALZIEL, Sumburgh, Shetland.
1908. BRYCE, PETER ROSS, 1 Lady Road.
1902. BRYCE, THOMAS H., M.A., M.D., Professor of Anatomy, No. 2 The University, Glasgow,—*Curator of the Museum*.
1889. BRYCE, WILLIAM MOIR, 11 Blackford Road,—*Vice-President*.
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- 1910.*BUCHANAN, FRANCIS C., Clannish, Row, Dumbartonshire.
1905. BURGESS, FRANCIS, 27 Lechlere Road, Willesden Green, London, N.W.
- 1887.*BURGESS, PETER, Craven Estates Office, Coventry.
1882. BURNET, Sir JOHN JAMES, LL.D., R.S.A., Architect, 18 University Avenue, Hillhead, Glasgow.
1892. BURNETT, Rev. J. B., B.D., The Manse, Fetteresso, Stonehaven.
1911. BURNETT, Rev. WILLIAM, B.D., Restalrig Manse, Lismore Crescent.
1887. BURNS, Rev. THOMAS, D.D., Croston Lodge, Chalmers Crescent.
- 1901.*BUTE, The Most Hon. The Marquess of, Mount Stuart, Rothesay.
1901. BUTLER, C. M'ARTHUR, Secretary of the Society of Architects, 28 Bedford Square, London, W.C. 1.
1913. BUTTI, JAMES A., 7 Queen Street.
1908. CADELL, HENRY M., B.Sc., F.R.S.E., Grange, Linkithgow.

- 1898.*CADENHEAD, JAMES, A.R.S.A., R.S.W., 15 Inverleith Terrace.
1898. CALLANDER, JOHN GRAHAM, Ruthvenfield House, Almondbank, Perthshire,—*Secretary*.
1908. CAMERON, Rev. ALLAN T., M.A., Chipstable Rectory, Wiveliscombe, Somerset.
1910. CAMERON, D. Y., A.R.S.A., A.R.A., LL.D., Dun Eaglais, Kippen.
1887. CAMERON, J. A., M.D., Firhall, Narn.
1905. CAMERON-SWAN, Lieut. DONALD, F.R.P.S., R.N.V.R., 78 Park Lane, Croydon, Surrey.
1899. CAMPBELL, ARCHIBALD, Park Lodge, 62 Albert Drive, Pollokshields, Glasgow.
1906. CAMPBELL, DONALD GRAHAM, M.B., C.M., Auchinellan, Elgin.
1886. CAMPBELL, Sir DUNCAN ALEXANDER DUNDAS, Bart., C.V.O., of Barcaldine and Glenure, 16 Ridgeway Place, Wimbledon, S.W. 19.
1917. CAMPBELL, J. H. MAYNE, Frimley Park, Surrey.
1909. CAMPBELL, Mrs M. J. C. BURNLEY, Ormisdale, Cohntraive.
- 1882.*CAMPBELL, PATRICK W., W.S., 25 Moray Place.
1901. CANFRAE, GEORGE, 77 George Street.
1906. CARMICHAEL, EVELYN G. M., Barrister-at-Law, Lillieshall Old Hall, Newport, Salop.
1891. CARMICHAEL, JAMES, of Arthursstone, Ardler, Meigle.
- 1888.*CARMICHAEL The Right Hon. LORD, of Skirling, G.C.I.E., K.C.M.G., 13 Portman Street, London, W. 1.
- 1901.*CARNEGIE, ANDREW, LL.D., Skibo Castle, Dornoch.
- 1871.*CARTWRIGHT, THOMAS LESLIE MELVILLE, Newbottle Manor, Banbury, Oxfordshire
1896. CAW, JAMES L., Director of the National Galleries of Scotland, 14 Cluny Place.
1890. CHALNERS, P. MACGREGOR, Architect, 95 Bath Street, Glasgow.
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1895. CHISHOLM, A. W., 7 Claremont Crescent.
1903. CHISHOLM, EDWARD A., 42 Great King Street.
1901. CHRISTIE, Miss ELLA R., Cowden, Dollar.
1910. CHRISTISON, JAMES, Librarian, Public Library, Montrose.
1916. CHRYSAL, FRANCIS MAXWELL, M.B., 5 Lauriston Park.
1902. CLARK, ARCHIBALD BROWN, M.A., Professor of Political Economy, University of Manitoba, Winnipeg, Canada.
1889. CLARK, DAVID R., M.A., 8 Park Drive West, Glasgow.
1913. CLARK, JOHN R. W., Westbank, Arbroath.
1908. CLAY, ALEXANDER THOMSON, W.S., 18, South Learmonth Gardens.
1903. CLEPHAN, ROBERT COLTMAN, Marine House, Tynemouth.
1908. CLINCH, GEORGE, F.G.S., 3 Meadowcroft, Sutton, Surrey.
1916. CLOUSTON, ERIC CROSBY TOWNSEND, Stratton Park, Biggleswade, Bedfordshire.
1905. CLYDE, The Right Hon. JAMES AVON, K.C., LL.D., M.P., Lord Advocate, 27 Moray Place.
- 1916 COATES, HENRY, Curator of the Perthshire Museums, Corander, Perth.
1891. COATS, Sir THOMAS GREN, Bart., C.B., Ferguslie, Paisley.
- 1905 *COCHRANE, KENNETH, Newfaan Isle, Galashiels.
1914. COCHRANE, Lt.-Col. The Hon. THOMAS, Crawford Priory, Springfield, Fife.
- 1901 *COCHRAN-PATRICK, Mrs ELLA A. K., Woodside Beith.
- 1898.*COCHRAN-PATRICK, NELL J. KENNEDY, of Woodside, Advocate, Ladyland, Beith.
1909. CORRIE, JOHN D., M.A., B.Sc., M.D., F.R.C.P.E., Lecturer on the History of Medicine, University of Edinburgh, 25 Manor Place.
1911. CORRIE, JOHN, Burnbank, Moniaive, Dumfriesshire.
1913. CORRIE, JOHN M., Anwoth Terrace, Newton St Boswells.
1901. COURTNEY, CHARLES J., Librarian, Mnet Public Library, Knatchbull Road, London, S.E.5.
1891. COUTTS, Rev. ALFRED, B.D., 5 Queensferry Terrace.
- 1879.*COWAN, Rev. CHARLES J., B.D., Morebattle, Kelso.
1887. COWAN, JOHN, W.S., St Roque, Grange Loan.
1888. COWAN, WILLIAM, 47 Braid Avenue.
- 1893.*COX, ALFRED W., Glendock, Glencarse, Perthshire.
1899. COX, BENJAMIN C., Gilston, Largoward, Fife.
- 1901.*COX, DOUGLAS H. (no address)
1882. CRABRIE, GEORGE, 8 Rothesay Terrace.
1892. CRAIG-BROWN, T., Woodburn, Selkirk.
1900. CRAN, JOHN, Backhill House, Musselburgh.
1911. CRAW, JAMES HEWAT, West Foulden, Berwick-on-Tweed.
1903. CRAWFORD, DONALD, K.C., LL.D., Sheriff of Aberdeen, Kincardine and Banff, 35 Chester Street.
1909. CRAWFORD, ROBERT, Ochilton, 36 Hamilton Drive, Maxwell Park, Glasgow.
1908. CRAWFORD, Rev. THOMAS, B.D., Orchul, Braco, Perthshire.

- 1901.*CRAWFORD, The Right Hon. The Earl of, Balcarres, Colinsburgh, Fife.
1905. CREE, JAMES EDWARD, Tusculum, North Berwick.
1913. CRESWELL, CLARENDON H. (Library), Royal College of Surgeons.
1886. CROSS, ROBERT, 13 Moray Place.
1907. CUMMING, ALEXANDER D., Headmaster, Public School, Callander.
1910. CUMMINO, W. SKEOCH, The Dovécot, Dovecot Road, Corstorphine.
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1893. CUNNINGTON, B HOWARD, Devizes.
1893. CURLE, ALEXANDER O., F.S.A., 8 South Learmonth Gardens,—*Director of Museum*.
- 1889.*CURLE, JAMES, F.S.A. Priorwood, Melrose,—*Curator of Museum*.
- 1886.*CURRIE, JAMES, Larkfield, Wardie Road.
- 1879.*CURSITER, JAMES WALLS, 80 Craiglea Drive.
1879. DALGLEISH, J. J., Branksten Grange, Bogside Station, Alloa.
1883. DALRYMPLE, The Hon. HEW HAMILTON, M.P., Lochinch, Wigtownshire.
1913. DALYELL, Major Sir JAMES, Bart., The Binns, Linthgow.
- 1886.*DAVIDSON, JAMES, Solicitor, Kirriemuir.
1910. DAVIDSON, JAMES, Summerville, Dumfries.
1909. DAVIDSON, JOHN MARR, Braedale, Lanark.
1915. DE LATOUR, Countess VINCENT BAILLET, Uiginish Lodge, Dunvegan, Skye.
1901. DEWAR, T. W., Harperfield, Sandilands, Lanarkshire.
1901. DICK, Rev. JAMES, Blackwood, Auldgirth, Dumfriesshire.
1906. DICKSON, LEONARD WALTER, C.A., 45 Manor Place.
1895. DICKSON, WILLIAM K., LL.D., Advocate, 8 Gloucester Place,—*Librarian*.
- 1882.*DICKSON, WILLIAM TRAQUAIR, W.S., 11 Hill Street.
- 1886.*DIXON, JOHN HENRY, Dundarach, Pitlochry.
1910. DIXON, RONALD AUDLEY MARTINEAU, F.G.S., F.R.G.S., 46 Marlborough Avenue, Hull.
1899. DOBIE, WILLIAM FRASER, St Katharine's, Liherton.
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1910. DONN, ROBERT, Blenheim, Americanmuir Road, Downfield, Dundee.
1911. DOUGLAS, JOHN, 6 St Mary's Grove, Barnes Common, London, S.W. 13.
1913. DOUGLAS, LUDON M., F.R.S.E., 29 West Savile Terrace, Newington.
1916. DOUGLAS, WILLIAM, 39 Inverleith Row.
- 1881.*DOUGLAS, W. D. ROBINSON, Orchardton, Castle-Douglas.
- 1912.*DRUMMOND, HUGH W., of Hawthornden, Lasswade, 3 Bryanston Square, London, W. 1.
- 1900.*DRUMMOND, JAMES W., Westerlands, Stirling.
- 1896.*DRUMMOND, ROBERT, C.E., Fairfield, Paisley.
- 1895.*DRUMMOND-MORAY, Capt. W. H., of Ahercairney, Crieff.
1902. DUFF-DUNBAR, Mrs L., of Ackergill, Ackergill Tower, Wick, Caithness.
1909. DUNCAN, Rev. DAVID, North Esk Manse, Musselburgh.
1917. DUNCAN, DAVID, J.P., Parkview, Balgay Road, Dundee.
1909. DUNCAN, JAMES, Librarian, Dundee (no address).
1910. DUNCAN, JAMES A., F.R.G.S., Logie-Aston, Bridge of Allan.
1912. DUNLOP, Sir NATHANIEL, LL.D., of Shieldhill, Biggar.
1904. DYER, EDMUND EUSTACE, M.B., C.M., Gladstone House, Alloa.
1913. EDGAR, Rev. WILLIAM, B.D., 4 Belmar Terrace, Pollokshields, Glasgow.
1909. EDINGTON, GEORGE HENRY, M.D., 20 Woodside Place, Glasgow.
1914. EDMONDSTON-SCOTT, W. J., M.A., Public Library, Museums and Art Galleries, Church Street, Brighton.
- 1892.*EDWARDS, JOHN, 4 Great Western Terrace, Glasgow.
1904. EELES, FRANCIS CAROLUS, F.R.Hist.S., 202 Grange Loan.
- 1885.*ELDER, WILLIAM NICOL, M.D., 6 Torphichen Street.
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1889. ERSKINE, DAVID C. E., of Linlathen, Linlathen House, Broughty Ferry.
1912. EWART, EDWARD, M.D., Ch.B., 20 Henleaze Avenue, Bristol.
1909. EWEN-WATSON, GEORGE J., W.S., Estate Office, Fort-William.
1912. FAIRWEATHER, WALLACE, Mearns Castle, Renfrewshire.
- 1880.*FAULDS, A. WILSON, Knockhuckle House, Beith.
1904. FERGUSON, JAMES ARCHIBALD, Banker, Norwood, 78 Inverleith Place.
1892. FERGUSON, JOHN, Writer, Duns.
1875. FERGUSSON, Sir JAMES R., Bart., of Spitalhaugh, West Linton.

- 1899.*FINDLAY, JAMES LESLIE, Architect, 10 Eton Terrace.
- 1892.*FINDLAY, Sir JOHN R., K.B.E., 27 Drumsheugh Gardens.
1911. FINLAY, JOHN, Southfield, Liberton, Midlothian.
1884. FLEMING, D. HAY, LL.D., 4 Chamberlain Road.
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1909. FOOTE, ALEXANDER ALLAN, Architect, Ancient Monuments Department, H.M. Office of Works, 30 Chalmers Street.
1917. FORGAN, ANDREW, 12 Durocher Street, Montreal, Canada.
1911. FORSYTH, WILLIAM, F.R.C.S. Ed., Inverock, Gerrard's Cross, Bucks.
- 1906.*FOULKES-ROBERTS, ARTHUR, Solicitor, Bron-y-parc, Denbigh, N. Wales.
1911. FRASER, ALEXANDER, LL.D., Litt.D., Kinneras Lodge, Woodlawn Avenue, Toronto, Canada.
1902. FRASER, EDWARD D., Dun Mohr, 24, The Ridling, Golder's Green, London, N.W. 4.
1898. FRASER, HUGH ERNEST, M.A., M.D., Medical Superintendent, Royal Infirmary, Dundee.
1917. FRASER, WILLIAM, 17 Eildon Street.
1912. GALLOWAY, Mrs LINDSAY, Kilchrist, Campbelltown.
1890. GARDEN, FARQUHARSON T., 4 Rubislaw Terrace, Aberdeen.
1908. GARDNER, ALEXANDER, Publisher, Dunroed, Paisley.
1915. GARDNER, JAMES, Solicitor, Clunie, Paisley.
1916. GARLE, Mrs MARY GLADYS LLOYD, The Manor House, Woodmancote, near Emsworth, Hants.
- 1916.*GARSON, JAMES, W.S., 4 Chester Street.
- 1891.*GARSTIN, JOHN RIBTON, D.L., M.A., Braganstown, Castlebellingham, Co. Louth, Ireland.
1911. GAWTHORP, WALTER E., 16 Long Acre, London, W.C. 2.
1909. GEMMELL, WILLIAM, M.B., C.M., D.P.H., Avoca, Victoria Drive, Scotstounhill, Glasgow.
1912. GIBSON, JOHN, Agent, British Linen Bank, Dundee.
1903. GIBSON, WILLIAM, M.A., 44 Piazza Farnese, Rome.
1896. GILLIES, PATRICK HUNTER, M.D., 25 Forbes Road.
1916. GILLIES, WILLIAM, 23 University Gardens, Glasgow.
1912. GILMOUR, ALLAN, jr., of Rosskeen, Woodbank, Alexandria, Dumbartonshire.
- 1912.*GLADSTONE, HUGH S., M.A., F.R.S.E., Capenoch, Thornhill, Dumfriesshire.
1901. GLADSTONE, Sir JOHN R., Bart., Fasque, Laurencekirk.
- 1913.*GLENCONNER, The Right Hon. LORD, The Glen, Innerleithen.
1914. GOBY, PAUL, 5 boulevard Victor Hugo, Grasse, Alpes Maritimes, France.
1909. GORDON, JAMES TENNANT, Chief Constable of Fife and Kinross, Bellbrae, Cupar, Fife.
1883. GORDON-GILMOUR, Colonel ROBERT GORDON, C.B., V.O., D.S.O., of Craigmillar, The Inch, Liberton.
- 1869.*GOURDIE, GILBERT, 31 Great King Street.
1911. GOURLAY, CHARLES, B.Sc., A.R.I.B.A., Professor of Architecture in the Royal Technical College, 30 Hamilton Drive, Hillhead, Glasgow.
1913. GRAHAM, ANGUS, Skipness, Argyll.
1917. GRAHAM, JAMES GERARD, Captain 4th Battalion The Highland Light Infantry, Carlin, Carlisle, Lanarkshire.
1909. GRAHAM, JAMES NOBLE, of Carlin and Stonebyres, Carlisle.
1910. GRAHAM, WILLIAM, Manager, Union Bank of Scotland, 7 Bruntsfield Crescent.
1888. GRANT, F. J., W.S., Lyon Office, H.M. General Register House.
1905. GRANT, JAMES, L.R.C.P. and S., Seafield House, Stronness.
1910. GRANT, JAMES, M.A., LL.B., Town Clerk of Banff, 23 Castle Street, Banff.
1911. GRAY, GEORGE, Town Clerk of Rutherglen, Threshrig, Blairbeth Road, Rutherglen.
1915. GRAY, WILLIAM FORBES, 8 Mansiounhouse Road.
1891. GREEN, CHARLES E., Gracemount, Liberton, Midlothian.
1887. GREIG, ANDREW, C.E., 10 Cluny Gardens.
1910. GRIERSON, Sir PHILIP J. HAMILTON, Advocate, Solicitor for Scotland to the Board of Inland Revenue, 7 Palmerston Place.
1880. GRIEVE, SYMINGTON, 11 Lauder Road.
- 1871.*GRUB, The Very Rev GEORGE, The Parsonage, Aberfoyle, Perthshire.
1909. GRUNDY-NEWMAN, S. A., F.R. Hist. Soc., Littleton Place, Walsall.
1909. GUILD, JAMES, B.A. (Lond.), L.C.P., 36 Hillend Road, Arbroath.
1910. GUNN, GEORGE, F.E.I.S., Craigmerten, Wick.
1911. GUNSON, Rev. ERNEST SHERWOOD, M.A., The Manse of New Monkland, by Airdrie.
- 1907.*GUTHRIE, CHARLES, W.S., 1 N. Charlotte Street.
- 1884.*GUTHRIE, The Hon. LORD, LL.D., 13 Royal Circus.

1904. GUTHRIE, SIR JAMES, LL.D., President of the Royal Scottish Academy, Rowmore, Row, Dumbartonshire.
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1907. GUY, JOHN C., Advocate, Sheriff-Substitute of the Lothians and Peeblesshire, 7 Darnaway Street.
1910. HALLIDAY, W., F.S.L.A., M.A., F.S. Litt., The Bungalow, Hegham-on-the-Hill, Nuneaton.
- 1901.*HAMILTON OF DALZELL, The Right Hon. LORD, K.T., C.V.O., Dalzell, Motberwell.
1898. HAMPTON, REV. DAVID MACHARDY, The Manse, Culross.
1911. HANNAN, REV. THOMAS, M.A., Rector of St Peter's Church, Trafalgar Lodge, Musselburgh.
1912. HANNAY, ROBERT KERR, Curator of the Historical Department, H.M. General Register House, 14 Inverleith Terrace.
1916. HARBERT, CHARLES LINDSAY, 49A Broughton Street.
- 1903.*HARRIS, WALTER B., Tangier, Morocco.
1913. HARRISON, G. A., Warrender. Murrayfield Avenue.
1887. HARRISON, JOHN, Rockville, Napier Road.
1913. HARROLD, Miss ELISABETH SEARS, Westover, Virginia, U.S.A.
1886. HART, GEORGE, Deanside, Craw Road, Paisley.
1905. HARVEY, WILLIAM, 4 Gowrie Street, Dundee.
1906. HATCH, REV. J. EDGAR, M.A., D.D., Northiam, Sussex.
1874. HAY, JAMES T., Blackhall Castle, Bauchory.
- 1865.*HAY, ROBERT J. A., c/o Messrs Dundas & Wilson, 16 St Andrew Square.
1917. HENDERSON, ADAM, Assistant Librarian, University Library, Glasgow.
- 1889.*HENDERSON, JAMES STEWART, 1 Pond Street, Hampstead, London, N.W. 3.
1909. HENDERSON, ROBERT, C.E., 29 York Place.
1891. HERRIES, Major WILLIAM D., yr. of Spottes, Spottes Hall, Dalbeattie.
1897. HEWAT, REV. KIRKWOOD, M.A., 23 St Bernard's Crescent.
1887. HEWISON, REV. J. KING, M.A., D.D., The Manse, Rotbesay.
- 1909.*HOLMS, JOHN A., Stockbroker, Sandyford, Paisley.
1914. HOME, GORDON C., 43 Gloucester Street, Warwick Square, London, S.W. 1.
1904. HORTON-SMITH, LIONEL GRAHAM HORTON, M.A., Barrister-at-Law, 58 Clarendon Road, Holland Park, London, W. 11.
1892. HOUSTON, REV. A. McNEILL, M.A., B.D., J.P., The Manse, Auchterderran, Cardenden, Fife.
- 1889.*HOWDEN, CHARLES R. A., Advocate, Sheriff-Substitute of Inverness, Elgin, and Nairn, Sheriff Court, Elgin.
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1898. HUNTER, SIR THOMAS, LL.D., W.S., Town Clerk of Edinburgh, Inverarbour, 54 Inverleith Place.
1898. HUTCHISON, JAMES T., of Moreland, 12 Douglas Crescent.
1909. HYDE, The Hon. JOHN, F.R.G.S., etc., Lanier Heights, Washington, D.C., U.S.A.
1912. HYSLOP, ROBERT, 5 Belle Vue Crescent, Sunderland.
1908. INGLIS, ALAN, Art Master, Arbroath High School, Beaufort, Montrose Road, Arbroath.
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- 1911.*INGLIS, HARRY R. G., 10 Dick Place.
- 1906.*INGLIS, JOHN A., Advocate, 13 Randolph Crescent.
1913. JACKSON, GEORGE ERSKINE, W.S., Kirkbuddo, Forfar.
1916. JOHNSON, JOHN BOLAM, C.A., 12 Granby Road.
- 1902.*JOHNSTON, ALFRED WINTLE, Architect, 29 Ashburnham Mansions, Chelsea, London, S.W. 10.
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1910. JOHNSTON, JOHN W., St Ann's, Sunningfields Road, Hendon, London, N.W. 9.
1907. JOHNSTON, WILLIAM CAMPBELL, W.S., 19 Walker Street.
1892. JOHNSTONE, HENRY, M.A. Oxon., 69 Northumberland Street.
1898. JONAS, ALFRED CHARLES, Locksley, Tennyson Road, Bognor, Sussex.
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1893. KAYE, WALTER JENKINSON, jun., B.A., F.S.A., Pembroke, Harrogate.
1912. KELLY, JOHN KELSO, 105 Morningside Drive.
- 1870.*KELTIE, JOHN S., LL.D., 30 Abbey Gardens, Abbey Road, London, N.W. 8.
1915. KELWAY, CLIFTON, F.R.Hist.S., 96 Gower Street, London, W.C. 1.
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- 1880.*KENNEDY, JOHN, M.A., 25 Abingdon Street, Westminster, S.W. 1.
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1912. KER, JAMES INGLIS, 162 West Princes Street, Glasgow.
- 1889.*KERMODE, PHILIP M. C., Advocate, Glen Aldyn, Ramsey, Isle of Man.
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- 1911.*KETCHEN, W. T., W.S., Keeper of the General Register of Sasines, H.M. General Register House.
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1912. KING, CHARLES, 21 Newton Place, Glasgow.
- 1912.*KING, SIR JOHN WESTALL, Bart., Stanmore, Lanark.
- 1900.*KINTORE, The Right Hon. The Earl of, G.C.M.G., LL.D., Keith Hall, Inverurie.
1912. KIRKE, MISS KATE JOHNSTONE, Hilton, Burntisland.
1896. KIRKPATRICK, JOHN G., W.S., 32 Morningside Park, Edinburgh.
1915. KIRKWOOD, CHARLES, Duncairn, Helensburgh.
1906. KNOWLES, Captain WILLIAM HENRY, F.S.A., Little Bridge, Gosforth, Newcastle-on-Tyne.
1910. LAIDLER, PERCY WARD, L.D.S., R.C.S. Edin., No. 1 General Hospital, Wynberg, C.P., South Africa.
- 1901.*LAMONT, SIR NORMAN, Bart., M.P., of Knockdow, Toward, Argyllshire.
- 1892.*LANG, Lieut.-Col. JAMES, 21 Kelvinside Terrace, Glasgow.
1893. LANGWILL, ROBERT B., 7 St Leonard's Bank, Perth.
- 1882.*LEADBETTER, THOMAS GREENSHIELDS, of Stobie-side, Strathaven, Spital Tower, Denholm, Roxburghshire.
- 1910.*LEIGH, Captain JAMES HAMILTON, Bindon, Wellington, Somerset.
1907. LEIGHTON, JOSEPH MACKENZIE, Librarian, Public Library, Greenock.
1907. LENNOX, DAVID, M.D., F.R.A.S., Tayside House, 162 Nethergate, Dundee.
- 1902.*LEVESON-GOWER, F. S., Travellers' Club, Pall Mall, London.
1907. LIND, GEORGE JAMES, 121 Rua do Golgotha, Oporto, Portugal.
1909. LINDSAY, Rev. JOHN, M.A., D.D., LL.D., "Bohemia," Glyndyfrdwy, Llangollen. N. Wales.
1890. LINDSAY, LEONARD C., Broomhills, Honiton, Devon.
1892. LINTON, SIMON, Oakwood, Selkirk.
- 1881.*LITTLE, ROBERT, Ardenlea, Northwood, Middlesex.
1915. LOCKHART, JOHN Y., 12 Victoria Gardens, Kirkcaldy.
1904. LOCKHART, SIR SIMON MACDONALD, Bart., of Lee and Carnwath, The Lee, Lanark.
- 1901.*LONEY, JOHN W. M., 6 Carlton Street.
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1915. LYON, Rev. W. T., Christ Church Rectory, Lanark.
1910. LYONS, ANDREW W., 44 India Street.
1892. MACADAM, JOSEPH H., Aldborough Hall, Aldborough Hatch, near Ilford, Essex.
1914. MACCALLUM, Rev. DONALD, Minister of Lochs, Manse of Lochs, Lewis.
1908. M'CONACHIE, Rev. WILLIAM, The Manse, Lauder.
1915. M'CORMICK, ANDREW, 66 Victoria Street, Newton-Stewart.
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1913. M'CORMICK, SIR WILLIAM S., LL.D., 13 Douglas Crescent.
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- 1900.*MACDONALD, GEORGE, C.B., F.B.A., M.A., LL.D., 17 Learmonth Gardens,—*Curator of Coins*.
1879. MACDONALD, JAMES, W.S., 21 Thistle Street.
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- 1890.*MACDONALD, JOHN MATHESON, Moor Hill, Farnham, Surrey.
1882. MACDONALD, KENNETH, Town Clerk of Inverness.
1890. MACDONALD, WILLIAM RAE, Neidpath, Wester Coates Avenue.
1896. MACDOUGALL, SIR JAMES PATTEN, K.C.B., Keeper of the Records of Scotland and Registrar-General, of Gallanach, Oban, 39 Heriot Row.

- 1872.*M'DOWALL, THOMAS W., M.D., East Cottingwood, Morpeth.
1908. M'ELNEY, Rev. ROBERT, M.A., The Manse, Downpatrick, County Down.
1911. M'EWEN, HUGH DRUMMOND, Lyndhurst, Primrose Bank Road, Trinity.
1892. MAC EWEN, Rev. JOHN, Dyke, Forres.
1903. M'EWEN, W. C., M.A., W.S., 9 South Charlotte Street.
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- 1898.*MACGILLIVRAY, ANGUS, C.M., M.D., 23 South Tay Street, Dundee.
- 1901.*MACGREGOR, ALASDAIR R., of Macgregor, The Hermitage, Rothesay, Isle of Bute.
1898. MACINTOSH, Rev. CHARLES DOUGLAS, M.A., Minister of St Oran's Church, Tigh-na-creige, Connel, Argyllshire.
- 1897.*MACINTYRE, P. M., Advocate, Auchengower, Brackland Road, Callander.
1908. MACKAY, GEORGE, M.D., F.R.C.S.E., 20 Drum-sheugh Gardens.
1903. MACKAY, GEORGE G., Melness, Hoylake, Cheshire.
1888. MACKAY, J. F., W.S., White House, Cramond Bridge, Midlothian.
1912. MACKAY, NORMAN DOUGLAS, M.D., B.Sc., D.P.H., Dall-Avon, Aberfeldy.
1882. MACKAY, WILLIAM, LL.D., Solicitor, Inverness.
1909. MACKEAN, NORMAN M., Parkgate, Paisley.
1909. MACKECHNIE, JOHN MACLELLAN, Solicitor, 6 Westbourne Gardens, Glasgow, W.
1911. MACKENZIE, ALEXANDER J., Solicitor, 62 Academy Street, Inverness.
1887. MACKENZIE, DAVID J., Sheriff-Substitute, 17 Athole Gardens, Glasgow, W.
- 1891.*MACKENZIE, JAMES, 2 Rillbank Crescent.
- 1872.*MACKENZIE, Rev. JAMES B., 6 Woodburn Terrace.
1911. MACKENZIE, JOHN, Dunvegan House, Dunvegan, Skye.
1900. MACKENZIE, Sir KENNETH J., Bart., King's and Lord Treasurer's Remembrancer, 10 Moray Place.
1910. MACKENZIE, MURDO TOLME, M.B., Scolpaig, Lochmaddy.
1882. MACKENZIE, R. W. R., Earlsball, Leuchars, Fife.
1904. MACKENZIE, WILLIAM COOK, 38 Mount Ararat Road, Richmond-on-Thames.
1904. MACKENZIE, W. M., M.A., Ellerker House, 63 Onslow Road, Richmond, Surrey.
- 1911.*MACKIE, PETER JEFFREY, of Glenreassidell, and Corraith, Symington, Ayrshire.
1913. MACKINTOSH, H. B., Redhythe, Elgin.
1893. MACKINTOSH, WILLIAM FYFE, Procurator-Fiscal of Forfarshire, Linreoch, 3 Craigie Terrace, Dundee.
1915. MACKIRDY, Captain ELLIOT M. S., M.A. Oxon., Lanarkshire Yeomanry, Birkwood Castle, Lesmahagow, Lanarkshire.
1878. MACLAGAN, ROBERT CRAIG, M.D., 5 Coates Crescent.
- 1885.*MACLEHOSE, JAMES, M.A., LL.D., F.S.A., 7 University Gardens, Glasgow.
1910. MACLEOD, FREDERICK THOMAS, 36 St Alban's Road.
- 1890.*MACLEOD, Sir REGINALD, K.C.B., Vinters, Maidstone, Kent.
1909. MACLEOD, ROBERT CRAWFURD, 19 Scotland Street.
1907. MACLEOD, Rev. WILLIAM H., B.A. Cantab., Manse of Buchanan, Drymen.
1875. MACMATH, WILLIAM, 16 St Andrew Square.
1905. MACMILLAN, H. P., K.C., 32 Moray Place.
1916. M'MILLAN, Rev. WILLIAM C. F., St Leonard's Manse, Dunfermline.
1915. MACNEIL, ROBERT LISTER, of Barra, The Wyoming, Washington, D.C., U.S.A.
1909. MACPHAIL, J. R. N., K.C., Sheriff of Stirling, Dumbarton, and Clackmannan, 17 Royal Circus.
1886. MACPHERSON, ARCHIBALD, Architect, 7 Young Street.
1909. MACRAE, Capt. COLIN, of Feoirinn, Colintrave, Argyll.
1908. MACRAE, Rev. DONALD, B.D., The Manse, Edderton, Ross-shire.
1914. MACRAE-GILSTRAP, Lieutenant-Colonel JOHN, of Eilean Donan, Ballimore, Otter Ferry, Argyll.
- 1882.*MACRITCHIE, DAVID, C.A., 4 Archibald Place.
1909. MALCOLM, JOHN, 5 Durham Gardens, Monifieth, Forfarshire.
1896. MALLOCH, JAMES, M.A., Dudhope Villa, Dundee.
1914. MALLOCH, JAMES J., M.A., Wakefield, Juniper Green.
1901. MANN, LUDOVIC M'LELLAN, 144 St Vincent Street, Glasgow.
1915. MANUEL, Rev. D. G., Manse of Mertoun, St Boswells.
1906. MARSHALL, HENRY B., Rachan, Broughton, Peeblesshire.
1885. MARSHALL, WILLIAM HUNTER, Callander, Perthshire.
1915. MARTIN, JAMES H., Hollybank, Panmure Terrace, Dundee.
1909. MARTIN, Rev. JOHN, 34 Inverleith Terrace.

1916. MARTIN, WILLIAM, J.P., 24 Athole Gardens, Kelvin-side, Glasgow.
1908. MASTIN, JOHN, M.A., D.Sc., Ph.D., Litt.D., LL.D., etc., Principal of Kenyon Hall College, Kenyon, near Manchester.
1884. MAXWELL, The Right Hon. Sir HERBERT EUSTACE, Bart., D.C.L., LL.D., F.R.S., of Monreith, Wigtownshire.
- 1892.*MAXWELL, Sir JOHN STIRLING, Bart., LL.D., Pollok House, Pollokshaws.
1904. MAY, THOMAS, F.E.I.S., F.S.A., Glencarn, Perth Road, Crieff.
1900. MENZIES, W. D. GRAHAM, of Pitcur, Hallyburton House, Coupar-Angus.
1878. MERCER, Major WILLIAM LINDSAY, Huntingtower, Perth.
1914. MIDDLEMISS, Rev. J. T., 3 The Beeches, West Didsbury, Manchester.
1882. MILLAR, ALEXANDER H., LL.D., Rosslynn House, Clepington Road, Dundee.
1896. MILLER, ALEXANDER C., M.D., Craig Linnhe, Fort-William.
- 1878.*MILLER, GEORGE ANDERSON, W.S., Knowehead, Perth.
1904. MILLER, JOHN CHARLES, North of Scotland and Town and County Bank, 67 St Vincent Street, Glasgow.
- 1907.*MILLER, ROBERT SCHAW, W.S., 14 Rosebery Crescent.
1911. MILLER, STEUART NAPIER, Lecturer in Roman History, The University, Glasgow.
1884. MITCHELL, HUGH, Solicitor, Pitlochry.
- 1890.*MITCHELL, SYDNEY, Architect, The Pleasance, Gullane.
- 1882.*MITCHELL-THOMSON, Sir MITCHELL, Bart., Caledonian Railway Hotel, Edinburgh.
1907. MOFFATT, ALEXANDER, M.A., LL.B., Advocate, Sheriff-Substitute of Stirlingshire, Arnotdale, Falkirk.
1916. MONCREIFF, The Hon. FREDERICK CHARLES, Marionville, Cohn-ton.
1908. MONTGOMERIE, JOHN CUNNINGHAM, of Dalmore, Stair, Ayrshire.
1895. MORAY, The Right Hon. The Earl of, Kinfauns Castle, Perth.
1882. MORRIS, JAMES ARCHIBALD, A.R.S.A., Architect, Wellington Chambers, Ayr.
1907. MORRIS, JOSEPH, Fern Bank, Clermiston Road, Corstorphine.
1882. MORRISON, HEW, LL.D., Librarian, Edinburgh Public Library, Torrisdale, 3 Corrennie Gardens.
- 1887.*MOUBRAY, JOHN J, Naemoor, Rumbing Bridge.
1904. MOUNSEY, J. L., W.S., Professor of Conveyancing, University of Edinburgh, 24 Glencarn Crescent.
1897. MOXON, CHARLES, 77 George Street.
1889. MUIRHEAD, GEORGE, F.R.S.E., Commissioner for the Duke of Richmond and Gordon, Speybank, Fochabers.
- 1879.*MUNRO, ROBERT, M.A., M.D., LL.D., Elmbank, Largs, Ayrshire.
- 1890.*MUNRO, Rev. W. M., Withdean Hall, Brighton, Sussex.
1899. MUNRO-FERGUSON, His Excellency The Right Hon. Sir RONALD CRAUFURD, of Novar, G.C.M.G., Raith, Kirkealdy.
1911. MURCHIE, JAMES, Penrioch, Kingcase, Prestwick, Ayrshire.
1910. MURRAY, CHARLES HOFF, jun., Stockbroker, 98 West George Street, Glasgow.
- 1878.*MURRAY, DAVID, M.A., LL.D., F.S.A., 169 West George Street, Glasgow.
1911. MURRAY, KEITH R., B.A., 27 St Leonard's Terrace, Chelsea, London.
1884. MURRAY, PATRICK, W.S., 7 Eton Terrace,—*Vice-President*.
1905. MURRAY, P. KEITH, W.S., 1 Douglas Gardens.
- 1905.*NAISMITH, WILLIAM W., C.A., 57 Hamilton Drive, Glasgow.
- 1911.*NAPIER, GEORGE G., M.A., 9 Woodside Place, Glasgow.
1907. NAPIER, HENRY M., Milton House Bowling.
1896. NAPIER, THEODORE, c/o Mrs Farquharson, 10 Melville Crescent.
- 1891.*NEILSON, GEORGE, LL.D., Wellfield, 76 Partickhill Road, Glasgow.
1900. NEWLANDS, The Right Hon. LORD, LL.D., Maulds-lie Castle, Carlisle.
1887. NEWTON, R. N. H., 3 Eglinton Crescent.
1907. NICOLSON, DAVID, C.B., M.D., 201 Royal Courts of Justice, Strand, London.
- 1877.*NIVEN, ALEXANDER T., C.A., 28 Fountainhall Road.
1891. NOBLE, ROBERT, Heronhill, Hawick.
1905. NORRIE, JAMES A., Craigtay, Ferry Road, Dundee.
1898. NOTMAN, JOHN, F.F.A., 176 Newhaven Road,—*Treasurer*.
1910. OGILVY, Mrs M. G. C. NISBET-HAMILTON, of Belhaven, Dirleton, and Winton, Biel House, Prestonkirk.
- 1907.*OKE, ALFRED WILLIAM, B.A., F.L.S., 32 Denmark Villas, Hove, Sussex.

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1896. ORMOND, Rev. DAVID D., Minister Emeritus of Craigs U.F. Church, 7 Dean Crescent, Stirling.
1907. ORR, JOHN M'KIRDY, 32 Dockhead Street, Saltcoats.
1916. ORR, LEWIS P., F.F.A., Secretary to the Scottish Life Assurance Co., 14 Learmonth Gardens.
1908. ORROCK, ALEXANDER, 16 Dalrymple Crescent.
1901. OWE, CHARLES, Architect, Benora, Broughty Ferry.
1903. PARK, ALEXANDER, Ingleside, Lenzie.
1917. PARK, FRANKLIN A., 149 Broadway, New York.
1915. PATERSON, JOHN WILSON, A.R.I.B.A., Ancient Monuments Department, H.M. Office of Works, 3 Hope Park Terrace.
1906. PATERSON, Miss OCTAVIA G., Ashmore, Helensburgh.
1891. PATON, VICTOR ALBERT NOEL, W.S., 31 Melville Street.
1880. PATTERSON, JAMES K., Ph.D., LL.D., President Emeritus, State University of Kentucky, Lexington, Kentucky, U.S.A.
1914. PATTERSON, T. BAXENDALE, L.D.S. Carisbrooke, 84 Station Road, Blackpool.
1909. PAUL, ARTHUR F. BALFOUR, Architect, 16 Rutland Square.
- 1871.*PAUL, Sir GEORGE M., LL.D., W.S., Deputy Keeper of the Signet, 16 St Andrew Square.
1879. PAUL, Sir J. BALFOUR, C.V.O., LL.D., Lord Lyon King-of-Arms, 30 Heriot Row.
1913. PAUL, J. N. WILFRED, B.A., M.R.E.I.S. (no address).
- 1902.*PAULIN, Sir DAVID, F.F.A., 6 Forres Street.
1891. PEACE, THOMAS SMITH, Architect, Junction Road, Kirkwall.
1913. PEACOCK, A. WEBSTER, Architect, 140 Princes Street.
1904. PEDDIE, ALEXANDER L. DICK, W.S., 13 South Learmonth Gardens.
1879. PEDDIE, JOHN M. DICK, Architect, 8 Albyn Place.
1916. PHILIP, ALEXANDER, LL.B. F.R.S.E., The Mary Acre, Brechin.
1912. PORTEOUS, ALEXANDER, Ancaster House, St Fillans, Perthshire.
- 1901.*PORTLAND, His Grace The Duke of, K.G., Welbeck Abbey, Notts.
1911. PRESTON, FRANK A. B., Architect, Ardwell, 16 Waverley Park, Shawlands, Glasgow.
1905. PRICE, C. REES, Walnuts, Broadway, Worcester-shire.
1900. PRIMROSE, Rev. JAMES, M.A., 8 Cathedral Square, Glasgow.
1906. PRINGLE, ROBERT, 11 Barnnton Gardens, Davidson's Mains.
1907. PULLAR, HERBERT S., Dunbarrie Cottage, Bridge of Earn.
1912. QUICK, RICHARD, Superintendent of Art Gallery and Antiquities, Bristol Museum, Queen's Road, Bristol.
1906. RAIT, ROBERT SANGSTER, 31 Lilybank Gardens, Glasgow.
1891. RAMSAY, WILLIAM, Bowland, Stow.
1908. RANKIN, WILLIAM BLACK, of Cleddans, 9 Lansdowne Crescent.
1879. RANKINE, JOHN, K.C., M.A., LL.D., Professor of Scots Law, University of Edinburgh, 23 Ainslie Place.
1913. RATTRAY, GEORGE D., 7 Springfield, Dundee.
1906. RAVEN, ALEXANDER JAMES, c/o The Capital and Counties Bank, Corshill, Ipswich.
1899. REA, ALEXANDER, Havalahalli Estate, c/o Postmaster, Yelahanka, Bangalore, Mysore State, India.
1909. REID, ALPHONSO STODART, Bank of England, Manchester.
- 1897.*REID, Rev. EDWARD T. S., M.A., Ravelston, 994 Great Western Road, Glasgow.
1912. RICHARDSON, JAMES S., Architect, 4 Melville Street.
1896. RICHARDSON, RALPH, W.S., 29 Eglinton Crescent.
- 1886.*RITCHIE, CHARLES, S.S.C., 20 Hill Street.
1907. ROBB, JAMES, LL.B., 7 Alvanley Terrace.
- 1898.*ROBERTS, ALEXANDER F., Farnilee, Selkirk.
1905. ROBERTS, JOHN, C.M.G., Littlebourne House, Dunedin, New Zealand.
1914. ROBERTS, J. HUBERT, Captain R.E., F.R.G.S., F.S.I., Bryntirion, Eaton Grove, Swansea.
- 1901.*ROBERTS, THOMAS J. S., Drygrange, Melrose.
1916. ROBERTSON, ALAN KEITH, Architect, 12 Russell Place, Leith.
1916. ROBERTSON, BRUCE. B.A., 7 Vinicombe Street, Hillhead, Glasgow.
1910. ROBERTSON, JOHN, 27 Victoria Road, Dundee.
1913. ROBERTSON, JOHN CHARLES (no address).
- 1886.*ROBERTSON, ROBERT, Huntly House, Dollar.
1915. ROBERTSON, ROBERT BURNS, Resident Architect, H.M. Office of Works, Windsor Castle, Windsor.
1905. ROBERTSON, W. G. AITCHISON, M.D., D.Sc., F.R.C.P.E., Mayfield Lodge, 2 Mayfield Gardens.
1914. ROBISON, JOSEPH, 14 Castle Street, Kirkcudbright.

- 1916.*RODGER, EDWARD. 1 Clairmont Gardens. Glasgow.
1905. ROLLO, JAMES A., Solicitor, Argyle House, Maryfield, Dundee.
1910. ROMANES, CHARLES S., C.A., 3 Abbotsford Crescent.
- 1872.*ROSEBURY AND MIDLOTHIAN, The Right Hon. The Earl of, K.G., K.T., D.C.L., LL.D., Dalmeny Park.
1876. ROSS, ALEXANDER, LL.D., Architect, Queensgate Chambers, Inverness.
1891. ROSS, THOMAS, LL.D., Architect, 14 Saxe-Coburg Place.
1915. RUSK, J. M., S.S.C., Clinton House, Whitehouse Loan.
1906. RUSSELL, Rev. JAMES C., D.D., 9 Coates Gardens.
1914. RUSSELL, JOHN, 323 Leith Walk.
1911. SAMUEL, Sir JOHN SMITH, K.B.E., 8 Park Avenue, Glasgow, W.
1907. SANDEMAN, DAVID D., Cairnbank House, Arbroath.
1905. SANDS, The Hon. LORD, LL.D., 4 Heriot Row.
- 1903.*SAYCE, Rev. A. H., M.A., LL.D., D.D., Professor of Assyriology, Oxford, 8 Chalmers Crescent, Edinburgh,—*Foreign Secretary*.
1912. SCLATER, Rev. HENRY GUY, Bowmore, Islay.
1910. SCOBIE, Captain IAN H. MACKAY, of the 1st Essex Regiment, c/o Messrs Cox & Co., Charing Cross, London, S.W. 1.
1892. SCOTT, Sir JAMES, J.P., Rock Knowe, Tayport.
1903. SCOTT, JOHN, W.S., 13 Hill Street.
1901. SCOTT, J. H. F. KINNAIRD, of Gala, Gala House, Galashiel.
1907. SCOTT, THOMAS G., 186 Ferry Road.
1893. SCOTT-MONCRIEFF, DAVID, W.S., 24 George Square.
1907. SCOTT-MONCRIEFF, ROBERT, W.S., 10 Randolph Cliff,—*Secretary*.
1889. SCOTT-MONCRIEFF, W. G., M.A., Honorary Sheriff-Substitute of Lanarkshire, Whitchurch Rectory, Edgeware, Middlesex.
1915. SCRYMGEOUR, NORVAL, Fellow of the Institute of Journalists, Helen Bank, Longforgan, by Dundee.
1913. SHAND, J. HARVEY, W.S., 38 Northumberland Street.
1908. SHEARER, JOHN E., 6 King Street, Stirling.
1913. SIM, Rev. GUSTAVUS AIRD, Valetta, Malta.
1915. SIMPSON, C. J. W., Principal Architect, H.M. Office of Works, Edinburgh, 51 Cluny Drive.
- 1880.*SIMPSON, ROBERT R., W.S., 23 Douglas Crescent.
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1916. SINCLAIR, SPEIRS PATON, C.A., 25 Grosvenor Street.
1910. SINTON, Rev. THOMAS, *D.D., Minister of Dores, Inverness-shire.
1907. SKERRINGTON, The Hon. LORD, 12 Randolph Crescent.
1909. SKINNER, ROBERT TAYLOR, M.A., F.R.S.E., House Governor, Donaldson's Hospital.
1902. SMITH, A. DUNCAN, Advocate, Rosehill, Banchory-Ternan.
1910. SMITH, DAVID BAIRD, LL.B., 6 Woodlands Terrace, Glasgow.
1892. SMITH, G. GREGORY, LL.D., Professor of English Literature, University of Belfast, 26 Windsor Park, Belfast.
1915. SMITH, JAMES, Conservator, Anthropological Museum, Marischal College, Aberdeen, 4 Belmont Place, Aberdeen.
1889. SMITH, ROBERT, Solicitor, 9 Ward Road, Dundee.
- 1892.*SMYTHE, Colonel DAVID M., Methven Castle, Perth.
1892. SOMERVILLE, Rev. J. E., B.D., Castellar, Crief.
- 1910.*SPENCER, CHARLES LOUIS, 5 Great Western Terrace, Glasgow.
- 1910.*SPENCER, JOHN JAMES, 5 Great Western Terrace, Glasgow.
1913. SQUANCE, THOMAS COKE, M.D., 15 Grange Crescent, Sunderland.
- 1903.*STARK, Rev. WILLIAM A., Church Place, Castle Douglas, Kirkcubright.
1904. STEEL, Rev. JAMES, D.D., Vicar of Heworth, Gateshead, Newcastle-on-Tyne.
1901. STEUART, A. FRANCIS, Advocate, 79 Great King Street.
1902. STEUART, JAMES, W.S., 25 Rutland Street.
1912. STEVENSON, DAVID, Firenze, 93 Trinity Road.
1895. STEVENSON, JOHN HORNE, M.A., Advocate, 9 Oxford Terrace.
1913. STEVENSON, NORMAN, Dechmont View, Sandyhills, Shettleston.
1913. STEVENSON, PERCY R., 5 North Charlotte Street.
1904. STEVENSON, Major-General T. R., C.B., Sunnyside, Lanark.
1911. STEWART, A. K., 1 Lynedoch Place.
1916. STEWART, CHARLES, W.S., 28 Coates Gardens.
1879. STEWART, CHARLES POYNTZ, Chesfield Park, Stevenage.
1901. STEWART, Sir HUGH SHAW, Bart., Ardgowan, Greenock.
1901. STEWART, Sir MARK J. M'TAGGART, Bart., Ardwell, Stranraer.

1913. STEWART, R. RANNOCH, 12 Lorne Terrace, Maryhill, Glasgow.
1885. STEWART, ROBERT KING, Murdostoun Castle, Newmains, Lanarkshire.
1914. STEWART, W. BALFOUR, Fir Grove, Park Road West, Birkenhead.
1908. STIRTON, Rev. JOHN, B.D., The Manse, Glamis, Forfarshire.
1889. STRATHERN, ROBERT, W.S., 13 Eglinton Crescent.
1910. STRUTHERS, Sir John, K.C.B., LL.D., 31 Sloane Gardens, London, S.W.
1904. STUART, Rev. JOHN, B.D., Kirkton Manse, Hawick.
1897. SULLEY, PHILIP, Moray Street, Elgin.
1897. SUTTIE, GEORGE C., J.P., of Lalathan, Lalathan Lodge, St Cyrus, by Montrose.
1884. SWALLOW, Rev. H. J., M.A., "Hawthornden," 23 Grand Avenue, West Southbourne, Bournemouth.
1916. SWAN, T. AIKMAN, A.R.I.B.A., 12 Claremont Crescent.
1900. SWINTON, Captain GEORGE S. C., Gattonside House, Melrose.
1913. SYKES, FRANK, Lorne Villa, Victoria Road, New Barnet, Herts.
1916. TAIT, EDWYN SEYMOUR REID, 82 Commercial Street, Lerwick.
1910. TAIT, GEORGE HOPE, 26 High Street, Galashiels.
1910. TERRY, Rev. GEORGE FREDERICK, F.S.A., Rector of St John's Episcopal Church, 10 Learmonth Terrace.
1902. THIN, ROBERT, M.A., M.B., C.M., 25 Abercromby Place.
1910. THOMAS, H. D., M.A., Oxon., Joint Headmaster of Cargilfield School, Cramond Bridge.
1900. THOMSON, ANDREW, Burgh School, Galashiels.
- 1906.*THOMSON, DAVID COUPER, J.P., D.L., Inveravon, Broughty Ferry.
1911. THOMSON, JAMES, M.A., LL.B., Solicitor, 1 West Bell Street, Dundee.
1913. THOMSON, JAMES, The Cedars, Fortisgreen Road, East Finchley, London, N.
1913. THOMSON, JOHN GORDON, S.S.C., 54 Castle Street.
1896. THOMSON, J. MAITLAND, LL.D., Advocate, 3 Grosvenor Gardens.
1910. THOMSON, WILLIAM N., Architect, 85 Constitution Street, Leith.
1898. THORBURN, MICHAEL GRIEVE, Glenormiston, Innerleithen.
1911. THORBURN, WILLIAM, Headmaster of the Public School, Ecclefechan, Dumfriesshire.
1907. THORP, JOHN THOMAS, LL.D., Brunswick House, 54 Princess Road, Leicester.
1910. TODD, HENRY GUICHARDE, Architect, 277 Regent Street, London, W 1.
- 1902.*TRAILL, H. LIONEL NORTON, F.R.G.S., Capt. 4th Highland Light Infantry, Grattan Lodge, Vicarstown, Stradbally, Queen's County, Ireland.
1899. TULLOCH, Major-Gen. Sir ALEXANDER BRUCE, K.C.B., C.M.G., Llanwysk, Crickhowell, S. Wales.
- 1887.*TURNBULL, WILLIAM J., 16 Grange Terrace.
1901. TURNBULL, W. S., Aikenshaw, Roseneath.
- 1917.*URQUHART, Captain ALA-THAIR, 13 Danube Street.
- 1878.*URQUHART, JAMES, N.P., Chief Assistant Keeper, General Register of Sasines, 13 Danube Street.
- 1905.*USHER, Sir ROBERT, Bart., of Norton and Wells, Wells, Hawick.
1904. WADDELL, JAMES ALEXANDER, of Leadloch, 12 Kew Terrace, Glasgow.
1909. WALKER, JOHN, M.A., Solicitor, S.Q.M.S., Lovat Scouts (on active service).
1879. WALLACE, THOMAS, Ellerslie, Inverness.
1915. WARD, The Venerable Archdeacon ALGERNON, M.A. Cantab., The Vicarage, Sturminster Newton, Dorset.
1917. WARNER, GRAHAM NICOLL, James Place, 387 Strathmartine Road, Downfield, Dundee.
- 1917.*WARRACK, JOHN, 13 Rothesay Terrace.
1916. WATERSON, DAVID, Fellow, Royal Society of Painter-Etchers, Lond., Bridgend House, Brechin.
1876. WATERSTON, GEORGE, 10 Claremont Crescent.
1904. WATLING, H. STEWARD, Architect, White Gables, Dovercourt, Essex.
- 1891.*WATSON, Rev. ALEXANDER DUFF, B.D., 433 Great Western Road, Aberdeen.
- 1907.*WATSON, CHARLES B. BOOG, F.R.S.E., Huntly Lodge, 1 Napier Road.
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1904. WATSON, JOHN, Architect, 27 Rutland Street.
1908. WATSON, JOHN PARKER, W.S., Greystane, Kinellan Road, Murrayfield.
1904. WATSON, WALTER CRUM, B.A., Oxon., Northfield, Balerno.
1912. WATSON, WILLIAM J., M.A., LL.D., F.R.S.E., Professor of Celtic Languages, Literature and Antiquities, University of Edinburgh, 8 Spence Street.

- 1907.*WATT, JAMES, W.S., F.F.A., 24 Rothesay Terrace.
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1879. WEDDERBURN, J. R. M., M.A., W.S., 3 Glencairn Crescent.
- 1884.*WHITE, CECIL, 32 Drummond Place.
1914. WHITE, GEORGE DUNCAN, of Kilrenny, 25 Market-gate, Crail.
1904. WHITE, JAMES, St Winnin's, Bearsden, Dumbartonshire.
1916. WHITE, JOHN, 18 Arthur Street, Pirig, Leith.
1903. WHITELAW, ALEXANDER, Gartshore, Kirkintilloch.
- 1902.*WHITELAW, CHARLES EDWARD, Architect, 141 Bath Street, Glasgow.
1907. WHITELAW, HARRY VINCENT, Ryden, Kilmacollm, Renfrewshire.
1913. WHITESIDE, Rev. JOSEPH, M.A., Plumstead Rectory, Aldborough, Norwich.
1900. WHITTAKER, CHARLES RICHARD, F.R.C.S., Lynwood, 27 Hatton Place.
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1895. WILLIAMS, Rev. GEORGE, Minister of Norrieston U.F. Church, Thornhill, Perthshire.
1897. WILLIAMS, H. MALLAM, Tilehurst, 81 Priory Road, Kew, Surrey.
1908. WILSON, ANDREW ROBERTSON, M.A., M.D., of Hopewell, Aberdeenshire, Cairnmore, Hose Side Road, Liscard, Cheshire.
1917. WILSON, LEONARD, Hyattsville, Maryland, U.S.A.
1913. WILSON, Rev. THOMAS, B.D., The Manse, Stow, Midlothian.
1912. WILSON, Rev. W. B. ROBERTSON, Strathdevon, Dollar.
1916. WINDUST, Mrs ESTHER, Pioneer Club, 9 Park Place, St James's, London, S.W. 1.
1907. WOOD, WILLIAM JAMES, 266 George Street, Glasgow.
1903. WRIGHT, Rev. FREDERICK G., Incumbent of St. John's without the Northgate, Chester, Kingscote, King Street, Chester.
1915. WRIGHT, JOHNSTONE CHRISTIE, F.R.S.E., Northfield, Colinton, Midlothian.
1913. YOUNG, THOMAS E., W.S., Auchterarder.
- 1912.*YULE, THOMAS, W.S., 16 East Claremont Street.

SUBSCRIBING LIBRARIES.

American Philosophical Society.
 Baillie's Institution, Glasgow.
 Central Public Library, Bristol.
 Free Public Library, Boston, Massachusetts,
 U.S.A.
 Harvard College, Harvard, U.S.A.
 Institute of Accountants and Actuaries in Glasgow.
 John Rylands Library, Manchester.
 Public Library, Aberdeen.

Public Library, Dundee.
 Public Library of Victoria, Melbourne, Australia.
 Reform Club, Pall Mall, London, S.W. 1.
 State Historical Society of Wisconsin, Madison,
 Wisconsin, U.S.A.
 University College, Dublin.
 University of Illinois, Urbana, Illinois, U.S.A.
 Yale University Library, New Haven, Connecticut,
 U.S.A.

LIST OF THE CORRESPONDING MEMBERS
OF THE
SOCIETY OF ANTIQUARIES OF SCOTLAND.

NOVEMBER 30, 1917.

- | | |
|--|---|
| 1916. ANDERSON, Rev. R. S. G., B.D., Oban House.
Ballure Road, Ramsey, Isle of Man. | 1915. MATHIESON, JOHN, 42 East Claremont Street. |
| 1900. BUCHANAN, MCGO, 23 South Alma Street,
Falkirk. | 1915. MORRISON MURDO, Lakefield, Bragar, Lewis. |
| 1913. FRASER, JOHN, 68 Restalrig Road, Leith. | 1911. NICOLSON, JOHN, Nybster, Caithness. |
| 1911. GOUDIE, JAS. M., J.P., Lerwick, Shetland. | 1917. REID, ALAN, F.E.I.S., The Loaning, Merchiston
Bank Gardens. |
| 1914. KIRKNESS, W., Fernlea, Kirkwall. | 1903. RITCHIE, JAMES, Hawthorn Cottage, Port Elphin-
stone, Inverurie. |
| 1908. MACKENZIE, WILLIAM, Procurator-Fiscal, Ding-
wall. | 1906. SINCLAIR, JOHN, St Ann's, 7 Queen's Crescent,
Edinburgh. |
| 1904. MACKIE, ALEX., Pitressie, Abernethy. | 1913. STOUT, Miss ELIZABETH, Scalloway, Shetland. |

LIST OF HONORARY MEMBERS
OF THE
SOCIETY OF ANTIQUARIES OF SCOTLAND,
NOVEMBER 30, 1917.

[According to the Laws, the number is limited to TWENTY-FIVE]

1879.

Rev. Canon WILLIAM GREENWELL, M.A., D.C.L., Durham.

1885.

Dr ERNEST CHANTRE, The Museum, Lyons.

1892.

Professor LUIGI FIGORINI, Director of the Royal Archæological Museum, Rome.

1897.

W. M. FLINDERS PETRIE, F.R.S., D.C.L., F.B.A., LL.D., Edwards Professor of Egyptology
in University College, London, W.C. 1.

5 Dr SOPHUS MÜLLER, Secretary of the Royal Society of Northern Antiquaries, and Director
of the National Museum, Copenhagen.

Professor OSCAR MONTELIUS, LL.D., Emeritus Royal Antiquary of Sweden, Stockholm.

1900.

EMILE CARTAILHAC, 5 Rue de la Chaîne, Toulouse.

F. J. HAVERFIELD, M.A., LL.D., Camden Professor of Ancient History, Winshields
Headington Hill, Oxford.

Rev. S. BARING GOULD, Lew Trenchard, North Devon.

10 ROBERT BURNARD, Huccaby House, Princetown, S. Devon.

1908.

Sir ARTHUR JOHN EVANS, M.A., D.C.L., Youlbury, near Oxford.

SALOMON REINACH, Director of the National Museum of Antiquities of France, St Germain-en-Laye.

Professor H. DRAGENDORFF, Zehlendorferstrasse, 55 Lichterfelde (West), Berlin-Gr.

14 Professor E. RITTERLING, Director of the Römisch-Germanische Kommission, Eschersheimers Landstrasse 107, Frankfort-on-Main.

LIST OF THE LADY ASSOCIATES
OF THE
SOCIETY OF ANTIQUARIES OF SCOTLAND,
NOVEMBER 30, 1917.

[According to the Laws, the number is limited to TWENTY-FIVE.]

1888.

The Right Hon. The COUNTESS OF SELKIRK, Balmae, Kirkcudbright.

1890.

Mrs P. H. CHALMERS of Avochie.

1894.

Miss EMMA SWANN, Walton Manor, Oxford.

1900

Miss M. A. MURRAY, Edwards Library, University College, London, W.C.1.
5 Mrs E. S. ARMITAGE, Westholm, Rawdon, Leeds.

SOCIETIES, INSTITUTIONS, &c., EXCHANGING PUBLICATIONS.

Architectural, Archæological, and Historic Society
 of Chester and North Wales.
 Berwickshire Naturalists' Club.
 Bristol and Gloucestershire Archæological Society.
 British Archæological Association.
 Buchan Field Club.
 Buteshire Natural History Society.
 Cambrian Archæological Association.
 Cambridge Antiquarian Society.
 Cumberland and Westmorland Antiquarian and
 Archæological Society.
 Derbyshire Archæological and Natural History
 Association.
 Dumfriesshire Natural History and Antiquarian
 Society.
 Edinburgh Architectural Association.
 Elgin Literary and Scientific Society.
 Essex Archæological Society.
 Gaelic Society of Inverness.
 Geological Society of Edinburgh.
 Glasgow Archæological Society.
 Hawick Archæological Society.
 Historic Society of Lancashire and Cheshire.
 Institute of Archæology, Liverpool.
 Kent Archæological Society.
 Lincolnshire Architectural and Archæological
 Society.
 New Spalding Club.
 Perthshire Society of Natural Science.
 Royal Anthropological Institute.
 Royal Archæological Institute of Great Britain
 and Ireland.
 Royal Commission on Ancient and Historical
 Monuments in Scotland.
 Royal Historical Society.
 Royal Irish Academy.
 Royal Numismatic Society.

Royal Society of Antiquaries of Ireland.
 Scottish Ecclesiological Society.
 Shropshire Archæological Society.
 Society of Antiquaries of London.
 Society of Antiquaries of Newcastle-upon-Tyne.
 Society of Architects.
 Somersetshire Archæological and Natural History
 Society.
 Stirling Natural History and Archæological Society.
 Surrey Archæological Society.
 Sussex Archæological Society.
 Thoresby Society.
 Viking Club.
 Wiltshire Archæological Society.
 Yorkshire Archæological Society.

FOREIGN SOCIETIES, UNIVERSITIES, MUSEUMS, &c.

Académie des Inscriptions et Belles Lettres, Paris.
 Alterthumsgesellschaft, Königsberg.
 Anthropologische Gesellschaft, Vienna.
 Antiquarische Gesellschaft, Zürich.
 Archæological Survey of India.
 Berliner Gesellschaft für Anthropologie.
 Bosnisch-Herzegovinisches Landes-Museum, Sara-
 jevo.
 British School at Rome.
 Bureau of Ethnology, Washington.
 Centralblatt für Anthropologie, Stettin.
 California University.
 Christiania University.
 Colombo Museum, Ceylon.
 Columbia University.
 Commissione Archeologica Comunale di Roma.
 Ecole d'Anthropologie de Paris.
 Faculté des Sciences de Lyon.

Foreningen til Norske Fortidsminde-
Bevaring.

Gesellschaft für Nützliche Forschung, Trier.

Göteborg och Bohusläns Fornminnesföreningen.

Göttingen University.

Historische und Antiquarische Gesellschaft, Basel.

Historische Verein für Niedersachsen.

Institut de Paléontologie Humaine, Paris.

Kiel University.

Kongelige Norske Videnskabers Selskab, Trond-
hjem.

Leipzig University.

Musée Guimet, Paris.

Musée National Suisse à Zürich.

Museum, Bergen, Norway.

Museum of Northern Antiquities, Christiania.

National Museum of Croatia.

Nordiska Museet, Stockholm.

Norsk Folkemuseum, Christiania.

Peabody Museum, Cambridge, Mass., U.S.A.

Physic-Oekonomische Gesellschaft, Königsberg.

Prähistorische Kommission der Kaiserliche
Akademie der Wissenschaften in Wien.

Provincial Museum, Toronto, Canada.

Reale Accademia dei Lincei, Rome.

Römisch-Germanisches Central Museum, Mainz.

Römisch-Germanische Kommission des Kaiser-
lichen Archäologischen Instituts, Frankfurt
am Main.

Royal Academy of History and Antiquities,
Stockholm.

Royal Bohemian Museum, Prague.

Royal Canadian Institute, Toronto.

Royal Society of Northern Antiquaries, Copenhagen.

Saalburg Kommission, Homburg, v. d. H.

Smithsonian Institution, Washington, U.S.A.

Società Romana di Antropologia, Rome.

Société d'Anthropologie de Paris.

Société des Antiquaires de l'Ouest.

Société d'Archéologie de Bruxelles.

Société Archéologique de Constantine, Algeria.

Société Archéologique du Midi de la France.

Société Archéologique de Montpellier.

Société Archéologique de Moravie.

Société Archéologique de Namur.

Société des Bollandists, Brussels.

Société Finlandaise d'Archéologie, Helsingfors.

Société d'Histoire et d'Archéologie de Gand.

Société Nationale des Antiquaires de France.

Stadisches Museum für Volkerkunde, Leipzig.
Upsala University.

Verein für Nassauische Alterthumskunde, Wies-
baden.

Verein von Alterthumsfreunden im Rheinlande,
Bonn.

PERIODICALS.

L'Anthropologie, Paris.

LIBRARIES, BRITISH.

Advocates' Library, Edinburgh.

Athenæum Club Library, London.

Bodleian Library, Oxford.

British Museum Library.

Chetham's Library, Manchester.

Durham Cathedral Library.

Faculty of Procurators' Library, Glasgow.

Free Library, Edinburgh.

Free Library, Liverpool.

Mitchell Library, Glasgow.

National Library of Wales, Aberystwyth.

Ordnance Survey Library, Southampton.

Public Record Office Library, London.

Royal Library, Windsor.

Royal Scottish Museum Library, Edinburgh.

Scottish National Portrait Gallery Library.

Signet Library, Edinburgh.

Trinity College Library, Dublin.

United Free Church College Library, Edinburgh.

University Library, Aberdeen.

University Library, Cambridge.

University Library, Edinburgh.

University Library, Glasgow.

University Library, St Andrews.

Victoria and Albert Museum Library, London.

LIBRARIES, FOREIGN.

Imperial Library, Vienna.

National Library, Paris.

Newberry Library, Chicago, U.S.A.

Public Library, Hamburg.

Royal Library, Berlin.

Royal Library, Copenhagen.

Royal Library, Dresden.

Royal Library, Munich, Bavaria.

Royal Library, Stockholm.

PROCEEDINGS
OF THE
SOCIETY OF ANTIQUARIES OF SCOTLAND

HUNDRED AND THIRTY-SEVENTH SESSION, 1916-1917

ANNIVERSARY MEETING, 30th November 1916.

THE HON. JOHN ABERCROMBY, LL.D., President,
in the Chair.

Sheriff C. N. Johnston, K.C., and Mr Robert Cross were appointed Scrutineers of the Ballot for the election of Office-Bearers.

The Ballot having been concluded, the Scrutineers found and declared the List of the Council for the ensuing year to be as follows:—

President.

• The Hon. JOHN ABERCROMBY, LL.D.

Vice-Presidents.

WILLIAM MOIR BRYCE.
ERSKINE BEVERIDGE, LL.D.
PATRICK MURRAY.

Councillors.

JOHN R. FINDLAY,	} <i>Representing the Board of Trustees.</i>	The Hon. LORD GUTHRIE, LL.D.
The Hon. HEW HAMIL- TON DALRYMPLE. M.P.		Sir JAMES BALFOUR PAUL, C.V.O., LL.D.
Sir KENNETH MACKENZIE. Bart..		JOHN A. INGLIS.
<i>Representing the Treasury.</i>		GEORGE MACKAY, M.D., F.R.C.S.E.
DAVID MACRITCHIE.		J. R. N. MACPHAIL, K.C.
CHARLES EDWARD WHITELAW.		JOHN BRUCE.
WILLIAM MACKAY MACKENZIE.		

Secretaries.

ROBERT SCOTT-MONCRIEFF, W.S. | J. GRAHAM CALLANDER.

For Foreign Correspondence.

The Rev. Professor A. H. SAYCE. M.A., | Professor G. BALDWIN BROWN. M.A.
LL.D., D.D.

Treasurer.

JOHN NOTMAN. F.F.A.

Curators of the Museum.

JAMES CURLE, W.S. | Professor THOMAS H. BRYCE, M.D.

Curator of Coins.

GEORGE MACDONALD, C.B., F.B.A., LL.D.

Librarian.

WILLIAM K. DICKSON, LL.D.

A Ballot having been taken, the following were duly elected:—

Corresponding Member.

Rev. R. S. G. ANDERSON, Stair Lodge, New Luce, Wigtownshire.

Fellows.

WILLIAM DOUGLAS, 39 Inverleith Row.
JAMES GARSON, W.S., 4 Chester Street.
WILLIAM GILLIES, 23 University Gardens, Glasgow.

ANNIVERSARY MEETING.

3

CHARLES LINDSAY HARBERT, 49A Broughton Street.

Rev. WILLIAM M'MILLAN, Chaplain to the Forces.

LEWIS P. ORR, F.F.A., Secretary to the Scottish Life Assurance Co., 14 Leamonth Gardens.

BRUCE ROBERTSON, B.A., 7 Vinicombe Street, Hillhead, Glasg w.

The following list of members deceased since the last Annual Meeting was read:—

Honorary Members.

	Elected.
JOSEPH ANDERSON, LL.D., H.R.S.A., 8 Great King Street	1913
Sir JOHN RHYS, LL.D., Professor of Celtic. and Principal of Jesus College, Oxford	1897

Lady Associates.

	Elected.
Miss H. J. M. RUSSELL of Ashiestiel, Galashiels	1895
Miss AMY FRANCES YULE of Tarradale, Ross-shire	1895

Corresponding Member.

	Elected.
DONALD MACKENZIE, Inland Revenue, Bonar Bridge	1909

Fellows.

	Elected.
Sir STAIR AGNEW, K.C.B., M.A., 22 Buckingham Terrace	1884
Rev. WILLIAM BLAIR, M.A., D.D., Leighton Manse, Dunblane	1891
VINCENT CONNELL BRUCE, B.A. Oxon., of Longside and Inverquhomery, 8 Ainslie Place	1912
WILLIAM CHRISTIE of Lochdochart, Braemar House, 3 Whitehouse Terrace	1909
JAMES DALLAS, 69 Bainton Road, Oxford	1911
The Right Hon. Sir CHARLES DALRYMPLE, Bart., LL.D., Newhailes, Musselburgh	1893
Colonel MONTAGUE DOUGLAS-CAMPBELL, D.S.O., 34 Abercromby Place	1908
DAVID DOUGLAS, 9 Castle Street	1861
JOHN FERGUSON, M.A., LL.D., Emeritus Professor of Chemistry, Glasgow University, 13 Newton Place, Glasgow	1890
CHARLES HENRY FOX, M.D., 35 Heriot Row	1883
PATRICK NEILL FRASER, Rockville, Murrayfield	1913
JAMES LAMB, Leabrae, Livery Terrace, Dundee	1899
CHARLES STEPHEN LESLIE of Balquhain, 11 Chanonry, Aberdeen	1907
HUGH GORDON LUMSDEN, Clova, Lumsden, Aberdeenshire	1873
JAMES LYLE, Waverley, Queen's Crescent	1906
JOHN COCHRANE M'EWEN, Trafford Bank, Inverness	1860
Sheriff THOMAS MACKENZIE, Tain	1870
Rev. W. M. METCALFE, D.D., South Manse, Paisley	1885
JAMES MILLER, Fern Public School, Brechin	1910

4 PROCEEDINGS OF THE SOCIETY, NOVEMBER 30, 1916.

	Elected.
RICHARD BLUNT MITCHELL of Polmood, 17 Regent Terrace	1886
GEORGE ROBERTSON, 6 Craighkennochie Terrace, Burntisland	1879
The Right Hon. LORD ROLLO, Duncrub Park, Dunning	1871
Lieutenant-Colonel Sir COLIN SCOTT-MONCRIEFF, R.E., K.C.S.I., K.C.M.G., LL.D., 11 Cheyne Walk, Chelsea, London	1893
Sir ALEXANDER R. SIMPSON, M.D., D.Sc., LL.D., 52 Queen Street	1871
WILLIAM STUART, Burnhouse, Stow	1907
J. B. SUTHERLAND, S.S.C., 10 Royal Terrace	1887
ROBERT M. SUTHERLAND, Solsgirth, Dollar	1899
Rev. WILLIAM TAYLOR, M.A., Minister of Melville Parish, Balinhard, Montrose	1901
Sir WILLIAM TURNER, K.C.B., M.B., D.C.L., LL.D., Principal and Vice- Chancellor of the University of Edinburgh, 6 Eton Terrace	1865
R. C. WALKER, Wingate Place, Newport, Fife	1884
FREDERICK BESSANT WILLIAMS, 3 Essex Grove, Upper Norwood, London, S.E.	1894

The Meeting resolved to record their sense of the loss the Society had sustained in the death of these members.

The Assistant Secretary read the following Report by the Council on the affairs of the Society for the year ending 30th November 1916, which, on the motion of the Chairman, was duly approved:—

The Council have the honour to submit to the Society their Report for the year from 30th November 1915 to 30th November 1916:—

Membership.—The total number of Fellows on the roll at 30th November 1915 was 708
At 30th November 1916 the number was 684
being a decrease of 24

There were 25 new members added to the roll during the year, while 31 members died, 10 resigned, and 8 allowed their membership to lapse.

Although this decrease in the number of Fellows cannot but be regarded as serious, the Council are not surprised at it, looking to the fact that there is at present no inducement in the way of Library to offer, and that the War is naturally absorbing the interests of all to the exclusion of every other subject. That under these circumstances 25 new members should have offered themselves for election is a remarkable testimony to the interest taken in antiquarian matters.

Of the 31 Fellows who have passed away during the year, two, namely Vincent C. Bruce of Longside and Inverquhomery, and Patrick

Neill Fraser, Rockville, Murrayfield, fell in action, and the Council feel sure that the Society will join in an expression of sympathy with their relatives in their sorrow and their pride.

The Council feel that they must also make special reference to other two Fellows whose loss they have to mourn, viz. Sir William Turner, K.C.B., and David Douglas, publisher. Sir William joined the Society in 1865, and took an active interest in its affairs. He contributed many valuable papers to its *Proceedings*, and was for several years a member of Council. As was but natural from his profession, his interest centred largely in craniology, and he had just completed before his death a valuable work entitled *A Contribution to the Craniology of the People of Scotland, both Modern and Prehistoric*.

Mr David Douglas joined the Society in 1861, and for many years took a prominent part in its work, having acted as its Treasurer from 1871 to 1882.

It is with genuine sorrow and with a feeling of real personal loss that the Council have to record the death of Dr Joseph Anderson, which took place on 29th September last. In March 1913 Dr Anderson resigned the posts of Keeper to the Museum and Assistant Secretary of the Society, which he had held for the long period of 43 years; and at the first meeting of the Society occurring thereafter Lord Guthrie, as Chairman, took advantage of the occasion to pay an eloquent tribute to Dr Anderson in his several capacities as Assistant Secretary to our Society and Editor of our *Proceedings*, as Keeper of the National Museum of Antiquities, as a Rhind Lecturer, and as our guide, philosopher, and friend. It would be impossible to exaggerate what this Society, and Scottish archaeologists generally, owe to Dr Anderson. He was one of the first to promote the study of archaeology on scientific lines, and to introduce scientific methods into the conduct of excavation. As Lord Guthrie said, "The present generation of antiquaries, experts and amateurs alike, look to him as their master. He has taught them all their trade, and if they are able in any measure to carry on his work in the future, it will largely be due to the lofty standard of study which he has always set before them." But it is not so much on account of his writings and lectures that Dr Anderson will live in the memory of those of us who had the pleasure and honour of associating with him, but rather on account of the kindly direction which he gave to our efforts, and of his strong personality. Few of us but were indebted to him for hints on our papers before they were read, and no paper when read ever seemed to be complete without the few words that Dr Anderson was always called upon to add. Those of our Fellows who are in the habit of attending our meetings are not likely to forget the

picture of his rugged, powerful face as, on the call of the Chairman, he slowly rose from his accustomed seat to criticise or amplify some paper which had just been read. How deliberately yet how unhesitatingly he expressed himself, how admirable was his choice of words, and how much to the point were his remarks! These little speeches of his were models of concise, eloquent, and forceful diction. We know from those who attended him in his last illness that the affairs of this Society were much in his thoughts, and that its welfare was dear to his heart. On our side it is not too much to say that Dr Anderson and his reputation were dear to us, and that we will cherish the memory of the man, his worth, and his work.

Dr Anderson's funeral took place on 2nd October, and the President and other members of Council, as well as a number of the Fellows, attended to pay their last tribute of respect. A wreath sent in name of the Society was laid upon his grave.

It is a matter for congratulation to know that an excellent portrait of Dr Anderson was painted a year or so before he retired, by Mr Henry W. Kerr, R.S.A., and that this portrait may probably find its way to the walls of the National Portrait Gallery.

On his retirement in 1913 Dr Anderson retained his appointment as Editor of our *Proceedings*. This post accordingly only became vacant on his death, and the Council had no hesitation in appointing as his successor the present Director of the Museum, Mr A. O. Curle, who for the last two years has been assisting Dr Anderson in his labours. It is unnecessary to point out to this Society the qualifications Mr Curle possesses for the efficient discharge of a task which demands both tact and discernment.

If the Council have been fortunate enough to secure the services of Mr A. O. Curle as Editor of their *Proceedings* in the meantime, they regret to have to report that in the near future they are to suffer the misfortune of losing his services as Director of the National Museum under their charge, and consequently as their Assistant Secretary. Mr Curle has been appointed Director of the Royal Scottish Museum in Chambers Street; and although he has been requested for the period of the war to continue to discharge the duties of both posts, this arrangement will cease on its termination and he will be obliged to resign the Directorship of the Museum of Antiquities. The Council can only regard Mr Curle's prospective departure with mixed feelings, for while, of course, they are glad that Mr Curle should be advanced to a sphere where he may have a greater scope for his energies, and are sincere in offering him their heartiest congratulations on the honour done to him, they regret, on the other hand, to lose an official who

was so admirably suited to his post, and who had already done so much to bring the National Museum abreast of the times in matters of arrangement and in the scientific preservation of objects.

Proceedings.—An advance copy of the *Proceedings* for the past year is on the table, the number of papers read during the year being 19, as against 26 read in the preceding year. As, however, the papers for the past year are on the whole rather longer than those of the preceding year, the size of the volume is well up to the average. Of the 19 papers, 10 deal with prehistoric and 9 with historic subjects.

Of the prehistoric papers perhaps the most outstanding is that dealing with the excavations at Traprain Law, but all will be found of interest, treating as they do of new finds throughout the country. Of the historic papers no complaint can be made on the score of want of variety, the subjects dealt with embracing a very wide range. It is therefore confidently expected that the present volume will be found no whit less interesting than its predecessors.

In connection with the *Proceedings* it will be remembered that in the Report last year reference was made to the preparation of a new General Index, and that Miss Catherine Borland had undertaken this difficult and tedious piece of work. Owing to Miss Borland's having accepted a post in connection with war work, the work of indexing was then taken up by our Secretary, Mr Callander. Now he has turned his attention to war work, and the Council are therefore afraid that the completion of the Index will have to lie over until the end of the war.

The Council regret having to report a loss which the Society has sustained owing to the destruction by fire of the printing premises of Messrs Neill & Co. We lost the remaining unbound copies of *The Early Christian Monuments of Scotland*, fortunately insured, and also a portion of our stock of paper and a number of the blocks for the current volume of the *Proceedings*. These unfortunately, owing to a misunderstanding, were not covered by insurance, but policies have now been taken out to cover any of our property which may from time to time be in the hands of either the printer or the bookbinder.

The Museum.—The Museum still remains closed, although the Council are glad to be able to report that the new fireproof floors have all been constructed, and that had times been normal the exhibits would long ere this have been retransferred to their places. As it is, the difficulty of obtaining the wood blocks necessary for the flooring is likely to delay matters for some considerable time to come. Even

when the structural alterations are completed, the procuring of the necessary new cases, the re-establishment of the staff, and the re-arrangement of the collections will cause still further delay.

The total number of objects added to the National Collection during the past year has been 85, of which 83 were by donation and 2 by purchase.

Consequent on the cessation of all archæological research owing to the war, it is not a matter of surprise that few objects of note have been added to the National Museum during the past year. It is symptomatic perhaps of the times that of the four groups of relics which are worthy of remark as having been unearthed, two of them were brought to light in military trenching. From Bantaskine, near Falkirk, thanks to the keen observation of our Fellow, Mr James S. Richardson, there were recovered from a trench several fragments of a bowl of the fine black polished ware known as Late Celtic, of which numerous examples have been discovered in the south and south-east of England and in France, but of which no specimen has hitherto been reported as having been found in Scotland. The other of note for which we are indebted to military operations is a fine coiled bronze armlet found on Wester Craiglockhart Hill, and which will be described in the *Proceedings* for next session. The other excavated relics have reached us through the instrumentality of the Rev. R. S. G. Anderson of New Luce. They are the valuable find—consisting of a bronze chisel, a bone pin, a bead of vitreous paste, and a cinerary urn—described by the Director in the volume of the *Proceedings* about to be issued, and a food-vessel urn found in a cairn at Craighirnock, New Luce, and forming the subject of a communication for next session. A donation of an unusual character is a collection of thirty-one Stone Axes from Northern Nigeria, which bear a striking resemblance to some axes found in our own country. The last donation to which we need refer is a fine example of old Scotch silver, a Rat-tail Spoon, made in Edinburgh in the year 1701. This object was the last donation made to the National Collection by the late Mr James Lyle, who of late years took a pleasure in adding to the Library or the Museum such books or objects as he possessed of antiquarian value. Death has robbed the Society of a sympathetic friend.

Excavations.—This year, for obvious reasons, no excavation work has been undertaken by the Society.

Library.—During the past year 62 books have been presented to the Library and 16 have been purchased. In addition, a considerable

number of publications of learned societies have been received by way of exchange.

The Society has not yet been able to return to its Library, and is therefore again beholden to the hospitality of the Royal Society for a room in which to hold its meetings.

Rhind Lectureship.—The Rhind Lectures for the year 1915 were delivered by Mr G. F. Hill, M.A., Keeper of Coins and Medals in the British Museum, his subject being "Medals of the Renaissance"; and we have just had the pleasure of listening to the admirable lectures of Professor W. J. Watson, LL.D., on "The Celtic Place Names of Scotland." The Lecturer for 1917 is Mr Charles Foulkes, Curator of the Armouries, H.M. Tower of London.

The Gunning Fellowship.—This Fellowship was awarded to Mr Callander, whose intention was to visit the various local museums and private collections throughout Scotland, thus not only obtaining a knowledge of what objects had been added to them since last a similar report was obtained, but also by personal visit to keep the parent Society in touch with local effort. Mr Callander had hardly begun his tour when, as already mentioned, he gave his services to war work.

The Chalmers-Jervise Bequest.—This year the County of Midlothian was selected as the district wherein the prehistoric subject for the Prize Essay was to be found. Though the competition was fully advertised, only one essay was lodged. As that was deemed to be of sufficient merit, the prize was awarded to the writer, Miss E. D. Dennison.

Mr John Notman, F.F.A., Treasurer, made the annual statement of the Society's Funds, which was ordered to be printed and circulated among the members; and on the motion of the Chairman a hearty vote of thanks was accorded to Mr Notman for his gratuitous services as Treasurer.

MONDAY, 11th December 1916.

The HON. JOHN ABERCROMBY, LL.D., President,
in the Chair.

A Ballot having been taken, the following was duly elected a Fellow:—

The Hon. FREDERICK CHARLES MONCREIFF. Marionville. Colinton.

There was exhibited a leaden casket containing the Heart referred to in Miss Hanna's communication, and the Secretary was instructed to convey the thanks of the meeting to the Mother Superior of St Margaret's Convent for having allowed it to be brought for exhibition.

The following Donations were announced:—

- (1) By Lieutenant J. D. B. CAMPBELL, R.H.A., through P. W. CAMPBELL, F.S.A.Scot.

Spirally twisted Armlet of Bronze (fig. 1) extending to three complete coils, $2\frac{3}{4}$ inches in diameter over all, formed from a rod of bronze, a pointed

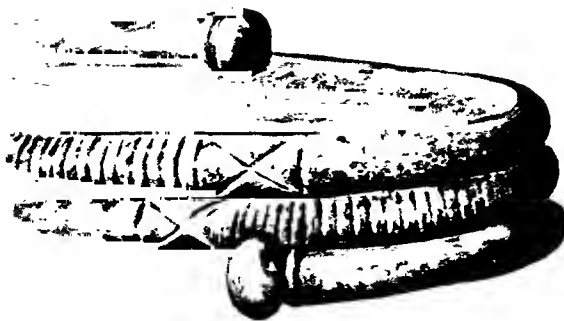


Fig. 1. Armlet of Bronze from Wester Craiglockhart Hill. ($\frac{1}{2}$.)

oval in section. The central coil of the spiral is treated with a segmental ornamentation on the outer surface, terminating at either end with a cross inside a panel. The rod slightly increases in thickness and assumes a circular form towards the extremities, which terminate with a moulding and a flattened spherical knob. Found on Wester Craiglockhart Hill.

(2) By D. HAY FLEMING, LL.D., F.S.A.Scot.

Medal, brass, commemorating the visit of George IV. to Scotland,
Obv.: Bust, laureate, to left. GEORGIUS BRITANNIARUM REX F.D.
Rev.: Thistle with leaves and two flowers. VISIT TO SCOTLAND
 AUGUST 1822.

(3) By Rev. G. A. SIM, F.S.A.Scot.

Token of the Scotch Church at Malta.

(4) By JOHN W. DODS, of Middlecrosswood, Clifton Hill, North
 Berwick.

Highland Dirk with serrated back, 19 inches in length, with knife
 and fork, and sheath of skin, ornamented with fleur-de-lis in panels
 on the front; handles of rosewood, and mounts of iron.

Fleam, formerly used for bleeding horses or cattle, $3\frac{1}{4}$ inches in
 length, in a cover of brass inlaid with wood, contained in a black
 leather case.

Mallet of wood, 8 inches in length, employed to drive in the fleam.

(5) By M. C. MACLEOD, 2 Buccleuch Place.

Badge of one of the Local Companies of Fencibles in form of an
 eight-pointed star, in the centre a crown surrounded by a ribbon bear-
 ing the words "Local Companies."

(6) Bequeathed by ROBERT DOBIE WILSON, 38 Upper Brook Street,
 London.

Pencil Drawing in front elevation of monument in the Skelmorlie
 Aisle, Church of Largs, entitled, "View of the Monument from the
 South-West."

Wash Drawing—"Developed Plan of the Ceiling of Monument in
 the Skelmorlie Aisle,"—both by W. H. Ross.

(7) By Rev. R. S. G. ANDERSON, New Luce, Wigtownshire.

Irregularly fashioned and imperfect Ring of Jet, markedly concave
 on its outer surface, $1\frac{9}{16}$ inch in greatest diameter.

Segment of an object of highly polished Jet with a chord of $2\frac{1}{4}$
 inches and a greatest breadth of $\frac{13}{16}$ inch. Both objects were found in
 a peat moss at Kilfedder, New Luce.

Food-vessel Urn found in a cist in the remains of a cairn at Craig-
 birnoch, New Luce. (See subsequent communication, p. 26.)

- (8) By JOHN MACDIARMID, Esq., Highland Agricultural Society's Offices.

Three small Brass Ring Brooches obtained from inhabitants of St Kilda in May 1877, two of them then in actual use.

- (9) By Mrs H. W. YOUNG of Burghead, through J. GRAHAM CALLANDER, *Secretary*.

Sherd of Pottery, probably Neolithic, $4\frac{1}{2}$ inches in length, with an everted lip and well-defined neck marked with vertical flutings. Found at Roseisle, Burghead, Elginshire, not in a grave.

Books for the Library:—

- (1) By HIS MAJESTY'S GOVERNMENT.

Calendar of the Patent Rolls. Edward III. Vol. xvi. A.D. 1374-1377. London, 1916.

Calendar of State Papers. America and West Indies, 1704-1705. London, 1916.

Calendar of State Papers. Venetian, 1628-1629. London, 1916.

Calendar of Treasury Books preserved in the Public Record Office. 1681-1685. Vol. vii., Parts 1, 2, and 3. London, 1916.

Close Rolls of the Reign of Henry III., preserved in the Public Record Office. 1242-1247. London, 1916.

Calendar of the Charter Rolls. Vol. v. 1341-1417. London, 1916.

Calendar of the Patent Rolls preserved in the Public Record Office. Henry VII. Vol. ii. 1494-1509. London, 1916.

Calendar of State Papers. Colonial Series. America and West Indies, 1706-1708. June. Preserved in the Public Record Office. London, 1916.

Accounts of the Lord High Treasurer of Scotland. Vol. xi. 1559-1566. Edinburgh. 1916.

Calendar of Inquisitions, Miscellaneous (Chancery). Vol. i., 1219-1307; vol. ii., 1307-1349.

- (2) Bequeathed by Mr ROBERT DOBIE WILSON, 38 Upper Brook Street, London.

The Church and Churchyard of Kilbirnie, by William Dobie. 64 pp. MS. With relative pamphlet—The Parish Church and Churchyard of Kilbirnie. Beith. 1850.

- (3) By JAMES WILKIE, B.L., F.S.A.Scot., the Author.

S. Brendan, the Voyager, and his Mystic Quest. London, 1916. 8vo.

- (4) By the HYDERABAD ARCHÆOLOGICAL SOCIETY.

The Journal of the Hyderabad Archæological Society for the first half-year of 1916. Bombay, 1916. 8vo.

- (5) By Dr SOLOMON T. H. HURWITZ, 217 East 69th Street, New York City, U.S.A., the Author.

Pygmy-Legends in Jewish Literature. Reprinted from the *Jewish Quarterly Review*, New Series, vol. vi., No. 3. Philadelphia, 1916.

- (6) By the CURATOR OF THE COLCHESTER MUSEUM OF LOCAL ANTIQUITIES.

Report of the Museum and Muniment Committee for the year ended 31st March 1916. Pamphlet.

- (7) By Mrs BRUCE of Sumburgh, F.S.A.Scot.

Description of Ye Countrey of Zetland. Copied from original papers in the Advocates' Library by the late Mr Bruce of Sumburgh. Edinburgh, 1908. 4to.

- (8) By T. J. WESTROPP, 115 Strand Road, Sandymount, Dublin, the Author.

Collectanea—Folk-lore and Legends from the Coasts of Counties Mayo and Galway. Pamphlet.

The Progress of Irish Archæology. Pamphlet.

- (9) By T. WILSON PARRY, M.A., M.D. Cantab., F.G.S., Belmont, Crouch End Hill. London, the Author.

The Art of Trephining among Prehistoric and Primitive Peoples: Their Motives for its Practice and their Methods of Procedure. Reprinted from the *Journal of the British Archaeological Association*, March 1916. Pamphlet.

- (10) By MONSIEUR LE DIRECTEUR, Office National des Universités et Écoles Françaises, 96 boulevard Raspail, Paris.

La Science Française. 2 vols., 8vo. Paris, Ministère de l'Instruction publique et des Beaux-Arts, 1915. Exposition Universelle et Internationale de San Francisco.

- (11) By the DIRECTOR OF THE COLOMBO MUSEUM.

Memoirs of the Colombo Museum. Ceylon, 1914. 4to.

14 PROCEEDINGS OF THE SOCIETY, DECEMBER 11, 1916.

(12) By Messrs GEORGE G. HARRAP & Co., the Publishers.

Scotland: An Account of Her Triumphs and Defeats, etc., from Earliest Times to the Death of Scott. By R. L. Mackie. London, 1916. 8vo.

(13) By the COUNCIL OF THE SCOTTISH HISTORY SOCIETY.

Scottish History Society. Highland Papers. Vol. ii., 1240-1716. Second Series, vol. xii.

(14) By JOHN A. INGLIS, F.S.A.Scot., the Author.

The Nisbets of Carfin. Reprinted from *Miscellanea Genealogica et Heraldica*, June 1916.

(15) By the YORKSHIRE PHILOSOPHICAL SOCIETY.

Annual Report for 1915.

(16) By ALBERT NICHOLSON, Portinscale, Hale, Altrincham, the Author.

Lieutenant John Holker. Reprinted from the *Transactions of the Lancashire and Cheshire Antiquarian Society*, vol. ix. Pamphlet. 1892. 8vo.

Samuel Maddock, "of Infamous Memory." Reprinted from *Manchester City News*, 14th December 1907. Leaflet.

(17) By the HON. SECRETARY, HUNTER ARCHÆOLOGICAL SOCIETY.

Transactions of the Hunter Archæological Society. Vol. i., Part 2. Sheffield, 1916. 8vo.

(18) By WASHINGTON UNIVERSITY, St Louis, U.S.A.

Washington University Studies. Vol. iii., Part 2., Nos. 1 and 2. St Louis, Mo., U.S.A., 1915 and 1916. 8vo.

(19) By W. C. MACKENZIE, F.S.A.Scot., the Author.

The Races of Ireland and Scotland. Paisley, 1916. 8vo.

(20) By the FIELD MUSEUM OF NATURAL HISTORY, Chicago, U.S.A.

Publication 186. Report Series. Vol. v., No. 1. Annual Report of the Director to the Board of Trustees for the year 1915.

DONATIONS AND PURCHASES FOR THE LIBRARY. 15

- (21) By the AUTHOR and the DIRECTOR OF THE NATIONAL MUSEUM OF WALES, City Hall, Cardiff.

The St Nicholas Chambered Tumulus, Glamorgan. By John Ward, F.S.A. With a report on the Human Remains, by Arthur Keith, M.D., F.R.S. Reprinted from *Archæologia Cambrensis*, Series VI., vol. xv. pp. 253-320; vol. xvi. pp. 239-294.

- (22) By ROBERT MURDOCH LAWRENCE, Cairnchina, 23 Ashley Road, Aberdeen, the Author.

Andrew Mackay, LL.D: a Distinguished Nautical Author. Reprinted from *The Aberdeen Book-lover*, November 1916. Pamphlet.

- (23) By JOHN M'TAGGART, Royal Scottish Museum.

The Roll of the Knights and Companions of the Most Sovereign and Social Order of the Cape and of C.F.D.

Purchases of Books for the Library:—

Historical MSS. Commission—

Report on the MSS. of Lord Polwarth, preserved at Mertoun House, Berwickshire. Vol. ii.

Calendar of the Stuart Papers belonging to His Majesty the King, preserved at Windsor Castle. Vol. vi.

Report on the Records of the City of Exeter.

An Introduction to the History of Dumfries. By Robert Edgar. Dumfries, 1915. 8vo.

The following Communications were read:—

I.

NOTES ON THE ROYAL HEART PRESERVED AT ST MARGARET'S
CONVENT, WHITEHOUSE LOAN, EDINBURGH. BY Miss J. M.
HANNA.

It is perhaps not generally known to the members of the Society of Antiquaries of Scotland that St Margaret's Convent, Whitehouse Loan, in this city, possesses an interesting relic of the Plantagenet kings in the form of the heart of one of them, which has been embalmed and enclosed in a leaden casket.

The following notes on this subject are entirely suggested by inquiries undertaken by M. Alexandre Pommier, Juge au Tribunal Civil of Orléans, a noted French archæologist. They are largely a translation of the paper prepared by him for the Archæological Society of that city.

Presumably it will be of interest for the Society of Antiquaries of Scotland to possess a record of all that is known of this relic, and in preparing such a record I wish to thank the Mother Superior of St Margaret's Convent, custodian of the relic, for her kind courtesy in furnishing much valuable information on the subject.

I understand from M. Pommier that lately there has been some suggestion in the French press as to the propriety of the present French Government following the example of Napoleon III., who, in 1867, proposed to cede to England the effigies of the Plantagenet princes in the old Abbey of Fontevrault, near Saumur. Whether this proposition be entertained by the Government or not, it adds a fresh interest to the relic now in Edinburgh, which, though its origin may be disputed, certainly came from Fontevrault. I shall try, in these notes, to throw some light on its origin, and also to follow its wanderings from Fontevrault to St Margaret's Convent, Edinburgh.

There were altogether six members of the Plantagenet line buried in the so-called Cemetery of the English Kings at Fontevrault:—

I. The first, and greatest, was King Henry II. (Curt Mantle), who died at Chinon in 1189.

Matthew of Paris, the chronicler of the thirteenth century, speaks of King Henry II. being buried with all pomp and ceremony at Fontevrault, but Sir James Ramsay¹ cites many authorities for the fact that he was abandoned and robbed by his servants at the last, and then hastily buried.

¹ *Angevin Empire*, vol. i. p. 245.

Besides Henry's tomb, we find those of—

- II. Richard Cœur de Lion, d. 1199.
- III. Jeanne (or Johanna) of England, sister of the above, and wife of Raymond VI., Count of Toulouse, d. 1199.
- IV. Eleanor of Aquitaine, widow of Henry II. and mother of the before-mentioned royal personages, d. 1204.
- V. Isabella of Angoulême, widow of John (Lackland), d. 1246.
- VI. Raymond VII. of Toulouse,¹ son of Jeanne of England and of Raymond VI.

Each of these six Plantagenet royalties had a distinct sepulture, with a monument surmounted by a recumbent effigy of the deceased. Of these effigies, four still remain (figs. 1 and 2). Three are figures of colossal size, hewn out of tufa rock: the fourth, that of Isabella of Angoulême, is smaller, and carved in wood; it has more artistic merit. All four are painted in colour.

In the year 1817, the Regent, afterwards George IV., asked for these four statues, but the Prefect of Maine and Loire upheld the right of the province to their possession.

The monuments remained intact in their original state till the year 1504.² In that year the Abbess Renée of Bourbon altered the position of the recumbent effigies, and even opened the underlying sepulchres. In 1562 the Huguenots ravaged Anjou and sacked the Abbey. In 1682, in the course of so-called improvements, the tombs were again disturbed, and by that date the monuments of Jeanne of England, wife of Raymond VI. of Toulouse, and of her son, Raymond VII., seem to have disappeared. Finally, in the year of the Revolution, 1793, the populace rose and utterly broke up the tombs, destroying the inscriptions and digging up the graves in hope of buried treasure.

What treasures the marauders discovered we do not know, but we can trace one relic disturbed in those troublous times, namely, the embalmed heart, the subject of these notes.

Rightly or wrongly, it has been known from those times till recently as the heart of Henry II.

The following letter, written in answer to inquiries as to its origin, in the year 1887, by M. Desnoyers, Vicar General, and Director of the Historical Museum at Orléans, gives its history in so far as he knew it, and he seems to take for granted that it was the heart of King Henry II. He says:—

¹ Raymond VII. is said to have been represented beating his breast in repentance for having embraced the doctrines of the heretics. See Cook's *Old Touraine*, vol. i. p. 80.

² Bordier and Charton's *Histoire de France* reproduces (p. 274) the statue of Eleanor, and (p. 312) that of Richard Cœur de Lion.

"This heart, buried in the church of the Abbey of Fontevault, was taken from its tomb in 1793, when the church was profaned by the impiety of the Revolution. It fell into the hands of a resident¹ who preserved it carefully in its leaden case as a curiosity. It was purchased from him by a native of Orléans, M. Crétie, writing-master, who lived in the Rue Royale. He had formed a collection of curiosities, and seized the chance of adding to it by including in it the heart of Henry II. After the death of M. Crétie, part of his collection was bought in 1825 by the curators of the Museum,² and the Royal Heart was among the objects thus sold by his heirs. It was exhibited in the Museum till the year 1857, when Monseigneur Gillis (Bishop of Lymira)

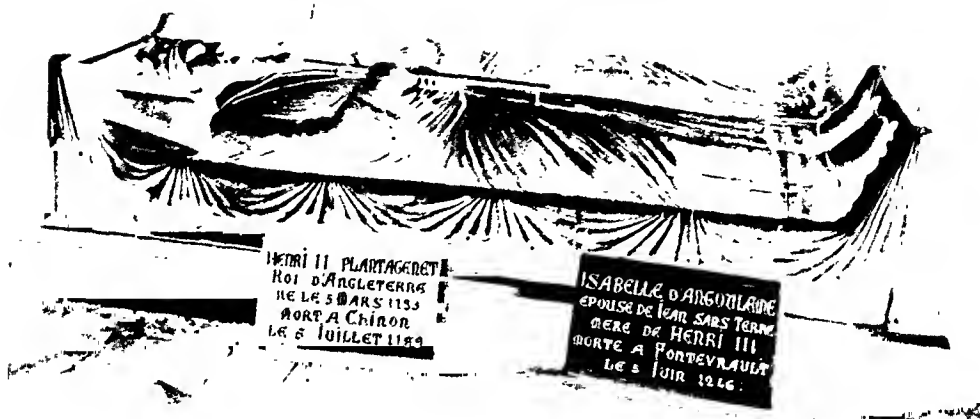


Fig. 1. Effigies of Henry II. and Isabella of Angoulême at Fontevault.

came to Orléans to preach the panegyric of Joan of Arc. He visited the Museum, and, the Director having brought it before his notice, he expressed a desire to take it back to England. The municipality authorised him to remove it. It was given to him. I, the subscriber, certify the exactitude of these details, to which I have been witness.

(Signed) DESNOYERS, VICAIRE GÉNÉRAL,
Director of the Historical Museum.

"ORLÉANS,
"March 19, 1888."

This letter from M. Desnoyers mentions that the heart was in the possession of an unnamed resident (probably, though not certainly, of the village of Fontevault) before it was purchased by M. Crétie of Orléans. The latter individual, a modest writing-master who died in

¹ Probably of Fontevault.

² Of Orléans.

1818, seems to have been a man of eclectic tastes, whose collection included stuffed birds, shells, fossils, ornaments—in fact, any object of rarity or interest which came in his way.

The relic consists of an embalmed and desiccated human heart, enclosed in a heart-shaped leaden case, the two sides of which were soldered together but are now beginning to open at the bottom and at one side. There is no inscription or ornament of any kind on the leaden envelope. This is, in its turn, encased in a strong cedarwood box with

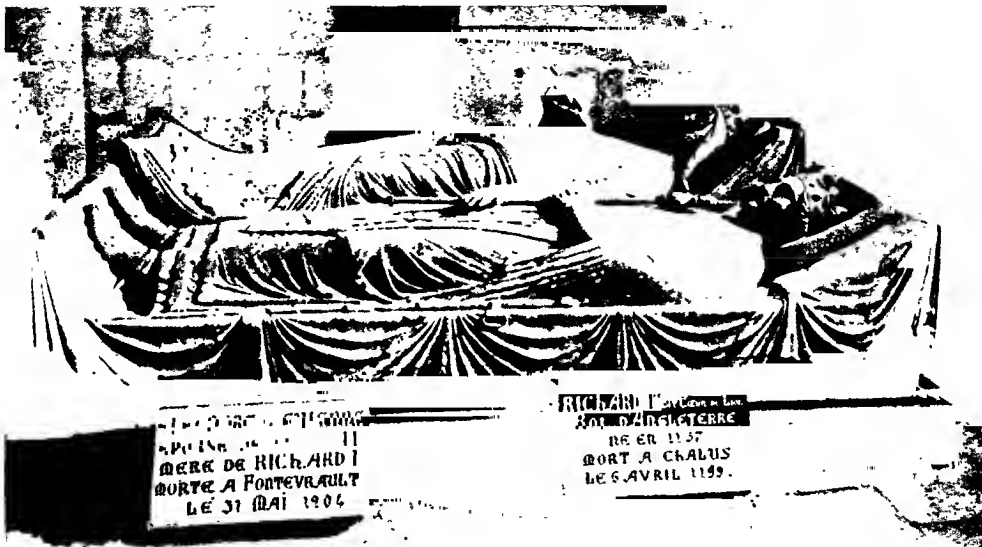


Fig. 2. Effigies of Richard I. and Eleanor of Aquitaine at Fontevrault.

lock and key, and labelled on the outside, "Heart of Henry II. of England."

In the archives of the Municipal Council of Orléans we find an allusion to the gift of the heart of King Henry II. to Monseigneur Gillis in the minutes of a meeting of Council on May 19, 1857.

M. Eugene Vignat (Mayor) moved:—

"That the Museum of Orléans possessed the heart of Henry II., King of England, died in Chinon in 1186 [a mistake for 1189], and buried at Fontevrault. The heart, encased in a leaden casket, has been at the Revolution removed from its funeral urn. Monseigneur Gillis, Bishop of Edinburgh, acquainted with this fact, has manifested a desire to take back this precious relic to his own country."

The Mayor asked the consent of the Council to give the heart to the Bishop, to be offered by him to the English Government in the name of the town of Orléans.

Permission was granted unanimously.

Monseigneur Gillis had suggested that a condition should be attached to this gift, namely, that the heart should be interred in the Royal Vaults at Westminster with religious rites,¹ and, failing the fulfilment of this condition, the municipality consented to the relic remaining in his own possession.

The Bishop's interview with Lord Palmerston, then Prime Minister, resulted in the annexed condition being refused, and Monseigneur Gillis brought the relic home to his house in Edinburgh. He conceived the idea of building a chapel in the convent church of St Margaret's, dedicated to St Thomas of Canterbury, where the heart of Henry II. should be united with relics of that saint. He applied to the Vatican for relics of St Thomas, which were granted; and also received from Sens part of a stone altar at which it was known that Thomas à Becket officiated when he took refuge at the pontifical court of Alexander III. in that town. The Bishop's plan was, however, frustrated by his death, in 1864, and he left the heart with other relics by will to St Margaret's Convent, Whitehouse Loan, where it still is, though the fact does not seem to be very generally known.

In the year 1888 doubts suggested themselves to the owners of the heart as to its true origin. They chiefly arose from an article signed "John Williams," which appeared in *Notes and Queries*.² The article is as follows:—

"I remember seeing in the year 1828, in the Museum of Orléans, the heart of King Henry II. of England, which was formerly preserved in the Abbey of Fontevrault. A hole, as far as I recollect, had been corroded in the leaden case which enclosed it, through which was visible a shrivelled object. This royal relic was a few years since given by the authorities of Orléans to Bishop Gillis of Edinburgh, to be by him handed over to the English Government. How has it been disposed of? My principal object, however, in sending you this note, is to express my persuasion that a mistake has been made as to the king, and that it is not the heart of Henry II., but of Henry III. Henry II. was buried at Fontevrault; Henry III. at Westminster. There is no historical evidence, as far as I know, of the heart of the former having been preserved separate from his remains. As his body was buried in the Abbey, there would be no particular reason for keeping the heart separate in the same establishment. If separated, it would surely have been sent to England.

"The manner of his burial," says Baker, "was thus. He was clothed in his royal robes, his crown upon his head, white gloves upon his hands, boots of gold upon his legs, gilt spurs at his heels, a great rich ring upon his finger,

¹ Narrative preserved at St Margaret's Convent.

² *Notes and Queries*, 2nd ser., xi. pp. 166-167, March 2, 1861.

the sceptre in his hand, his sword by his side, and his face uncovered and all bare.'

"There is, however, incontestable proof of the heart of Henry III. having been consigned to the Abbess of Fontevrault, to be preserved in that monastery. This is clear from the following decree of his son Edward I., dated 3rd December 1291, and to be seen in Rymer:—¹

"The King to all and sundry (whom it may concern), greeting.

"Whereas we have understood for certain that Lord Henry, of famous memory, formerly King of England, our father, having himself for long lived at the monastery of Fons Ebroidus (Fontevrault) promised his heart, after his death, to the same monastery, and the Abbess—dear to us in Christ—of the foresaid monastery, arriving lately in England, prayed that that heart, according to the promise aforesaid, be delivered to her: Walter Abbot of Westminster, dear to us in Christ, delivered the entire heart foresaid in the presence of the Venerable A. of Durham, and R. of Bath and Wells, Bishops, and of our beloved and liege Edmund our brother, William de Valence, our uncle, and very many our other lieges, on Monday, next before the feast of the Blessed Lucy, Virgin, in the twentieth year of our reign, in the church of Westminster, to the foresaid Abbess, by our good will and command, to be carried away to the foresaid Monastery of the Fons Ebroidus, and to be buried in the same. In whose, etc. (probably in witness whereof). The King being witness in London.

"The third day of December.'²

"I would ask, therefore, if the above-named relic be the heart of Henry II., what has become of the heart of Henry III.? The mistake, if mistake it be, probably originated in the patent fact of Henry II.'s interment in the Abbey. I am, however, quite ready to surrender my opinion to anyone more competent to enlighten us.

(Signed) JOHN WILLIAMS.

"ARNO'S COURT."

The Reverend Mother Superior, Mary Bernard Clapperton, whose attention had been directed to the foregoing article, instituted inquiries in various quarters, and a correspondent in Angers, in touch with M. Célestin Port,³ decidedly echoes the opinion of Mr Williams that the heart was not that of Henry II., but of his grandson Henry III., which was enclosed in a golden vase and buried in the sepulchre of his mother Isabella of Angoulême. The golden vase may have utterly disappeared at the time of the Revolution, if not before.

In view of the fact that the leaden case of the heart bears no inscription, the question is difficult, if not impossible, to decide. There are, however, two arguments in favour of its having belonged to Henry III. They are:—

I. We have no contemporary testimony that Henry II.'s heart was embalmed or buried separately. We *do* know that his burial was hurried

¹ Rymer, vol. i. p. 376.

² This date is erroneous. In 1291 St Lucy's Day (December 13) fell on a Monday. The Monday before would be December 8.

³ Author of *Recueil Archéologique de Maine et Loire*.

and neglectful, though his son, Geoffrey, the Chancellor, saw that a certain ceremony was observed at the interment.

II. We have King Edward I.'s writ of 1291 distinctly entrusting his father Henry III.'s heart to the Abbess of Fontevrault.

It is interesting to note that Henry III. and his wife, Eleanor of Provence, on a tour through France in the year 1254, halted on the 15th of November at the Abbey of Fontevrault, and stayed there for five days, with the object of visiting his ancestors' tombs.¹ Henry, who loved churches, shrines, and monasteries, may then have determined the future destination of his heart, and have charged his son Edward to carry out his wishes.

It may be remarked, in conclusion, that the custom of separate interment for the heart of distinguished personages seems to have originated in Anjou in the twelfth century.² The heart, being the noblest organ of the human body, was sent as a token of special esteem and affection. It was usually, though not always, dedicated to a church or a convent; Richard Cœur de Lion, for example, directed his heart to be sent to the town of Rouen, in thanks for its fidelity.

There are so many instances of these separate interments that we can only cite a few examples:—

Dante in his *Inferno*, canto xii., speaks of "The Heart that still upon the Thames is honoured." This was the heart of "Henry of Allmaine," nephew of Henry III., and eldest son of his brother Richard, Duke of Cornwall and King of the Romans. He was murdered by Guy and Simon de Montfort on the altar steps of the parish church of Viterbo, "in God's bosom," as Dante calls it, in the year 1271. His heart, enclosed in a golden vase, was placed on the tomb of Edward the Confessor at Westminster, while his body was finally laid to rest in the Cistercian Abbey of Hayles, Gloucestershire.³

Henry of Allmaine's father, Richard, Duke of Cornwall and King of the Romans, was also buried at Hayles, while his heart was placed in the custody of the Friars Minor at Oxford.⁴

Coming nearer home, we find that Devorgilla, widow of John Balliol of Barnard's Castle, who died in 1269, reared at once to his memory

¹ Ramsay's *Dawn of the Constitution*, p. 149.

² M. Godard-Faulthier, in the *Mémoires* of the Society of Agriculture, Science, and Art of Angers, vol. xxiv. p. 193 (1882).

Note.—On the subject of the tombs of the Plantagenets at Fontevrault, one may consult—

I. *Les Monuments de la Monarchie*, by Monfaucon, vol. ii. p. 113, plate 15.

II. A monograph by Louis Courajod in the *Gazette des Beaux Arts*, 1867, vol. xxiii. p. 537 (from letter dated April 1816).

For these references, as well as for the greater part of the material included in these notes, I am indebted to M. Alexandre Pommier of Orléans.

³ See Sir James Ramsay's *Dawn of the Constitution*, p. 275, *et op. cit.*

⁴ *Ibid.*, p. 276.

the splendid pile of Sweetheart Abbey, "so called from her husband's embalmed heart in an ivory casket built in over the high altar. After her death it was placed on her bosom in the coffin."¹

A comparatively recent instance of this old custom is alluded to by Mr Patrick Begbie in two letters to the Society of Antiquaries to be found in *Archæologica Scotica*, vol. ii. p. 116. He writes that in the Valleyfield and Culross families there had long been a vague and undefined tradition of the existence of a Silver Heart in the ruins of the old Abbey of Culross. Whose the heart was, and where it was laid, were equally unknown, till in the year 1808 Sir Robert Preston of Valleyfield caused a square altar tomb, without inscription or name, which was in his burial aisle, to be carefully unbuilt. Beneath the tomb two stone slabs were found to be hollowed out, and to contain the Silver Heart in question, together with a leaden case, also heart-shaped, the use of which it is more difficult to determine. An inscription on the silver case showed that it contained the heart of Edward, second Lord Bruce of Kinloss, who was killed in a duel fought in 1613 with Sir Edward Sackville, afterwards Earl of Dorset, near Bergen-op-Zoom, in Holland. The body of Lord Bruce was interred in the great church of Bergen-op-Zoom, while his heart was sent home and deposited in Culross Abbey. After this discovery, and a record having been made of the whole circumstances, the two cases, silver and leaden, with their contents, were replaced between the stone slabs, and the tomb rebuilt as before. An inscription recording the ownership of the Silver Heart was placed above it.

There are even more modern instances of the persistence of this ancient custom, but the most familiar example to all Scotsmen is undoubtedly that of Bruce's heart. King Robert the Bruce, when dying at Cardross, directed that his body should be interred at Dunfermline and his heart sent to Jerusalem, to make the pilgrimage which he had failed to accomplish in his lifetime. The heart was taken to Spain by the good Sir James Douglas, and then brought home again to Scotland by Sir Simon Lockhart of Lee, and finally buried before the high altar of Melrose Abbey.

In making this disposition of his remains King Robert followed a well-established custom among royal and princely personages, which seems to have had its greatest vogue in the twelfth, thirteenth, and fourteenth centuries, and of which the heart of King Henry III. (as we may well assume it to be) now at St Margaret's Convent, Edinburgh, is yet another example.

¹ Sir Andrew Agnew's *The Hereditary Sheriffs of Galloway*, vol. i. p. 93.

II.

NOTICE OF TWO BURIAL URNS FOUND IN THE PARISH OF
MUIRKIRK, AYRSHIRE. By J. G. A. BAIRD, F.S.A.Scot.

The two urns which are the subject of this notice were found in a cairn on Wetherhill, a grassy knoll surrounded by moss, at 1128 feet above sea-level, at the western end of a ridge which, beginning near

the village of Glenbuck, in the parish of Muirkirk, close to the county march with Lanarkshire, runs in a westerly direction for about a mile and a quarter, with its highest point at 1273 feet. The knoll is formed by an outcrop of dolerite rock which comes to the surface at the cairn. Round the top of the outcrop the cairn is formed of stones two or three deep according to size. Its shape is circular; it measures 30 feet from N. to S., and 25 feet from E. to W., and has no kerb at the edges. The first urn (fig. 1) was found in a cranny of the rock about 4 feet to the north of the core. It had evidently been laid on its side safe from any pressure except from the top, but a stone had slipped from above and crushed



Fig. 1. Food-vessel Urn from Cairn at Muirkirk. (c. $\frac{1}{2}$.)

it badly. Nothing was found with it. The second urn (fig. 2) was lying bottom upwards in another nook about 7 feet to the south of the core, and was very badly crushed. When found it was a mere lump of earth, charcoal, and burnt bones, with only its rim remaining. Fragments of charcoal were scattered over the rock, and about 7 feet from the core and 9 feet to E. of the second urn there was a deposit of charcoal and burnt bones on the spot where, it may be presumed, the burning of the corpse took place. The story of the funeral of a person probably of distinction seems complete. The rock, a suitable spot for the pyre and a conspicuous place of burial; and the urns—one filled with the ashes of the dead,

for their better preservation placed where it might be supposed to be safe from destruction; the other similarly placed but empty, a relic of a common superstition,—appear to form a faithful record of one method of disposing of the dead during the Bronze Age.

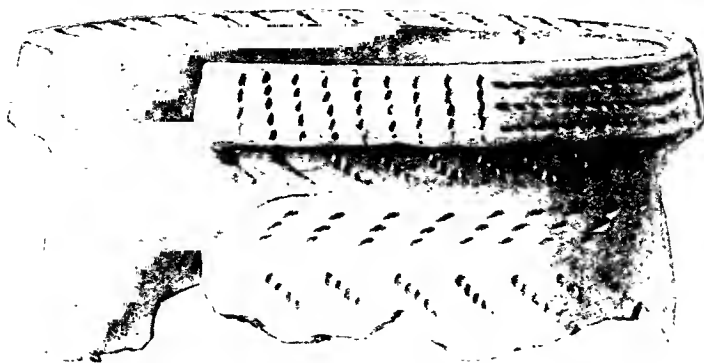


Fig. 2. Sectioned view of Cinerary Urn from Cist at Muirkirk. ($\frac{1}{2}$.)

By the kindness of Professor Bayley Balfour, an examination was made by his assistant, Mr H. F. Tagg, of certain fragments of carbonised wood found beneath the cairn, and which were identified as remains of birch and oak.

REPORT ON THE BONES. By Professor T. H. BRYCE, F.S.A.Scot.

The deposit of bones found in the urn is a small but typical one. The bones are very much comminuted, and no fragment is present which conveys any information regarding either the age or sex of the individual.

The second deposit from the separate burial represents only a portion of the original deposit. It consists of burnt bones of chalky appearance and fracture. Only one fragment is recognisable, and represents the neck of the mandible. Its size suggests the possibility that the individual was of small stature and a woman.

III.

ACCOUNT OF THE EXPLORATION OF A CAIRN AT CRAIGBIRNOCH,
NEW LUCE, WIGTOWNSHIRE.¹ BY THE REV. R. S. G. ANDERSON,
B.D., CORRESPONDING MEMBER.

On the lands of Craighbirnoch, about $\frac{3}{4}$ of a mile SW. of Pultadie
farmhouse, and 60 yards E. of the New Luce-Glenwhilly road, opposite



Fig. 1. Cairn at Craighbirnoch showing Cist.

the projecting corner of an enclosed field, lies the more northerly of
two dilapidated cairns (fig. 1). About 37 feet in diameter, one half of it
is now entirely reduced to ground-level, save for a low marginal ring.
The other half retains the foundation layer of large stones, arranged
in concentric circles close together, sparsely covered with small stones.
At one point only does the height reach to about 2 feet.

On the edge of this low heap, and almost exactly in the centre of

¹ Cf. *Inventory Royal Commission Ancient Monuments (Scotland), County of Wigton, No. 274.*

the cairn, a cist is exposed. It is placed in a line NE. by SW., and its floor is sunk about 3 inches below ground-level. Its interior measurements are—length, 22 inches; breadth, $14\frac{1}{2}$ inches; depth, 15 inches. Two of the walls—an end and a side—are single slabs of greywacke, $2\frac{1}{2}$ inches thick; the other side, of the same material, is irregular in shape and short, and must have been supplemented by other stones to raise it to the cover-level. The sides are sunk to floor-level, whilst the end stones have sills to rest on at ground-level. The floor is paved with medium-sized flattened stones, very neatly and exactly fitted. Unfortunately, the cover and the end stone towards the NE. are both missing, and inquiries of the roadman, who unknowingly uncovered this cist two years ago in his quest for road metal, elicited no information.

When discovered in June last (1916) the cist was almost filled with loose stones on a layer of earth that was level with the sills. No objects showed on the surface; but by riddling, the earth yielded over forty fragments of a food-vessel. These had been scattered throughout the cist; but the main pieces were found in the SE. corner, crushed together as if by violence. The original fracture probably took place by the collapse of the built-up portion of the side here, under the strain of the superimposed mass of the cairn. Altogether, about a third of the urn was retrieved, and, fortunately, enough to provide practically a complete section both of the structure and of the decoration (fig. 2). These proved to be of the characteristic type.

The food-vessel had been 6 inches in height. For $4\frac{1}{2}$ inches of this, the bowl swelled upwards from a base $2\frac{1}{2}$ inches in diameter to its greatest width of 6 inches at the shoulder, thence turning inwards to meet the rim. The rim was an everted curve, $\frac{3}{4}$ inch broad, finished at the top with a vertical band $\frac{1}{8}$ inch deep. The inner lip was a shallow curve— $\frac{3}{4}$ inch broad, set at a descending angle. The material of which the urn was constructed is a coarse black earth or clay, $\frac{1}{2}$ inch thick, coated thinly both inside and out with a fine light reddish-brown paste.

From the base a space of $2\frac{1}{2}$ inches in height is encircled by 8 fluted rings, roughly equidistant, and with plain intervals. Above this are 8 more rings of a similar type, reaching to the lower edge of the rim, having their intervals filled with decoration. The two lowest intervals show hatching right and left respectively; the other six having zigzag ornament and hatching alternately. This zigzag decoration has been very simply and effectively produced by two series of triangular depressions, the upper inverted and fitted into the lower so as to leave the narrow surface-space between as a zigzag line, almost wholly in relief, encircling the bowl. Where the bowl begins to turn towards

the neck, the fluted ring is both deeper and broader than the others and shows greater exactness in execution. It is intersected by at least two low knobs. Above the 16th ring, the ornament of the rim consists of a narrow band of zigzag surmounted by the herring-bone pattern, whilst the narrow vertical band at the lip is filled with hatching. Three rows of hatching in alternate directions constitute the decoration of the interior of the lip. The design is executed with no little freedom

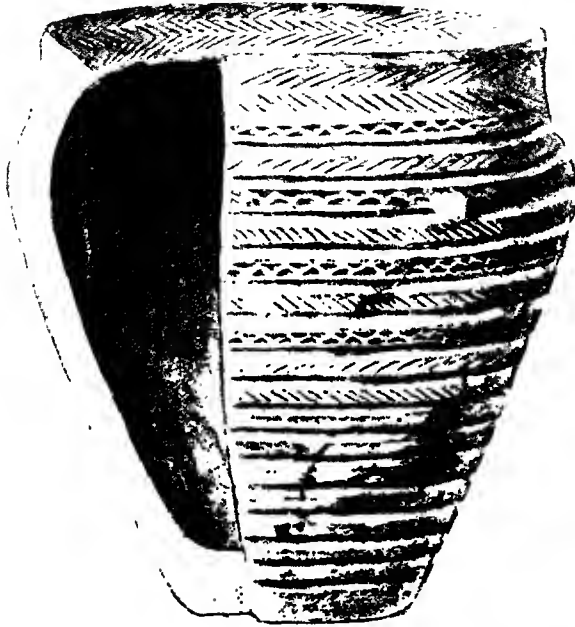


Fig. 2. Sectioned view of Food-vessel Urn found in Cist at Craighirnoch. ($\frac{1}{2}$.)

and vivacity, suggesting considerable facility and ease in the skill of the decorator, as well as a decided artistic sense.

Close to the base of the food-vessel was found a small deposit of burnt bones. In the angle of the base itself, among some caked earth, traces of bones and charcoal were also found, probably introduced after the breakage. Throughout the whole cist and between the crevices of the stones fragments both of bones and charcoal were in evidence.

No other objects were found in the cist, and no evidences of any secondary burial were observed on the site of the cairn.

An examination of the charcoal by Mr H. F. Tagg of the Royal Botanic Garden, Edinburgh, kindly obtained by Professor Bayley Balfour, shows it to consist of fragments of carbonised oak.

EXPLORATION OF A CAIRN AT CRAIGBIRNOCH, NEW LUCE. 29

REPORT ON THE BONES. By Professor T. H. BRYCE.

The fragments of bone in the larger and smaller envelopes represent a typical deposit of burnt human bones. Portions of long bones, skull bones, and teeth occur, but no fragment is distinctive enough to enable one to determine the age or sex of the individual.

MONDAY, 8th January 1917.

GEORGE MACDONALD, C.B., F.B.A., LL.D., in the Chair.

A Ballot having been taken, the following were elected Fellows:—

STAIR CARNEGIE AGNEW, M.A., LL.B., Barrister at Law, 22 Buckingham Terrace.

DAVID DUNCAN, J.P., Clerk, Dundee Burgh Insurance Committee, Park-view, Balgay Road, Dundee.

ADAM HENDERSON, Assistant Librarian, University Library, Glasgow, 673 Dumbarton Road, Glasgow.

GRAHAM NICOLL WARNER, James Place, 387 Strathmartine Road, Downfield, Dundee.

LEONARD WILSON, Hyattsville, Maryland, U.S.A.

The following Donations were announced:—

(1) By WILLIAM FORSYTH, F.R.C.S.E., F.S.A.Scot.

Token of St Andrew's Church, Port Louis, Mauritius. *Obr.* ST ANDREW'S CHURCH, PORT LOUIS, MAURITIUS, 60. *Rev. Text.* Oblong, corners cut.

(2) By HIS MAJESTY'S GOVERNMENT.

Calendar of State Papers, Foreign Series, of the Reign of Elizabeth. Vol. xix. August 1584-August 1585.

(3) By the SUPERINTENDENT OF ARCHEOLOGY, Hyderabad State.

Annual Report of the Archaeological Department of His Highness the Nizam's Dominions, 1914-15. Calcutta, 1916.

(4) By the DIRECTOR OF THE COLOMBO MUSEUM.

Memoirs of the Colombo Museum, Series A, No. 2: Sinhalese Banners and Standards, by Edward W. Perera. Colombo, 1916. 4to.

(5) By GEORGE MACDONALD, C.B., F.B.A., M.A., LL.D., F.S.A.Scot.,
the Author.

The Evolution of Coinage. Cambridge, 1916. 8vo.

The following Communications were read:—

I.

NOTES ON SOME STONE CIRCLES IN CENTRAL ABERDEENSHIRE.

By JAMES RITCHIE, F.E.I.S., CORRESPONDING MEMBER.

During several successive years Mr F. Coles made a survey of the Stone Circles of Aberdeenshire on behalf of the Society of Antiquaries of Scotland, and his reports embodying the results of the survey appear in vols. xxxiv. to xxxix. of the *Proceedings* of the Society. These reports give, for the first time, a full and systematic account of the Aberdeenshire circles, and furnish in a readily accessible form a mass of information regarding them which should prove exceedingly valuable to subsequent investigators.

The following notes on some of the circles in Central Aberdeenshire are intended to supplement these reports, by describing a few circles which had been omitted from the survey, and supplying additional information regarding some of the others.

FRENDRAUGHT.

The lands of Frendraught lie in the parish of Forgue, about 7 miles north-east of the town of Huntly. They have become well known in Scottish history through the terrible tragedy recorded in the ballad of "The Burning of Frendraught," which event occurred there in the year 1630. The owner of the estate at that period was Sir James Crichton, who seems to have been of a somewhat quarrelsome disposition. Early in the year he got into trouble with a neighbouring proprietor, Gordon of Rothiemay, who was slain in the quarrel, with the result that Sir James had to pay 50,000 merks to his heirs. Shortly afterwards he became involved in another dispute, with Leslie of Pitcaple. This time, however, the High Sheriff, the Marquis of Huntly, decided the case in favour of Sir James Crichton. As it was rumoured that Leslie intended to waylay Sir James on his homeward journey, the High Sheriff sent a number of gentlemen to accompany him, among whom was young Gordon of Rothiemay. The party arrived safely at Frendraught, and the visitors were persuaded to stay overnight there. They were hospitably entertained by Sir James and his lady, and were

lodged for the night in the Old Tower, which stood a little apart from the remainder of the buildings. About midnight fire broke out in the tower, and spread so rapidly that nothing could be done to rescue the guests, though it is said that they appeared at the windows and called loudly for help, before they perished in the flames. The fire very likely was an accidental one, but as it was never satisfactorily explained how it originated, public opinion laid the blame of it on the Lady of Frendraught, who was credited with using this method of getting rid of some of her enemies, including Gordon of Rothiemay.

But this is not the only tragedy that occurred at Frendraught, if the traditions still floating about in the district have a basis of fact. One of these relates how, on one occasion, a brawny Highlander had occasion to pass the house. He was observed by the lady, who remarked to her husband that he was the prettiest man she had ever seen. This remark led to a quarrel, and her husband, filled with jealous anger, is said to have rushed from the house and followed the unsuspecting Highlander, whom he slew, and buried under a large stone near the hill top.

Another tradition relates that the gallows, so frequently in use in the olden times, had become so unstable that a new one had to be erected. When it was finished there was some doubt as to whether it would work satisfactorily. Just as the workmen were discussing the matter, a poor cadger, leading a pony carrying on its sides panniers laden with fish for sale, appeared on the scene. He was a stranger, with no one near to protect him, so, it is said, he was at once seized and hanged. The workmen's doubts were thus set at rest, for the gallows was found to work satisfactorily.

The inhabitants of the district are now eminently quiet and respectable, but these traditions, whether true or not, serve to show the value which was set upon human life in the olden times in this neighbourhood. And if so little respect was paid to the living, it could hardly be expected that much reverence would be felt for the ancient burial-places of the long-forgotten dead. The condition of the Stone Circle of Frendraught (fig. 1) seems to confirm this, for it is in a very dilapidated state. It stands just within the wood, near the north-eastern boundary of the farm of Hillhead of Frendraught. When complete it must have been a large and imposing erection, having about a dozen standing-stones in its circumference, and a diameter of, at least, 85 feet. Most of the standing-stones must have been removed many years ago, for the oldest inhabitant cannot remember any more than four, along with the fragments of several others lying in the western arc. About seventy years ago an attempt was

made to break up some of the stones then in existence, so that they might be used for lintels, but the material did not prove satisfactory, and the broken fragments are still lying where they fell, one of them having marks of the bore-holes still in it.

The recumbent stone faces the south, and measures 5 feet in length, but, as a portion 1 foot 7 inches long has been broken off (fig. 2), the total length must have been originally 6 feet 7 inches. Its height above



Fig. 1. Frendraught Stone Circle from the north-east, showing Recumbent Stone and fallen East Pillar.

ground is 6 feet 3 inches, and its greatest breadth is 3 feet 6 inches. The east pillar, which has fallen, measures 7 feet 4 inches in length, 2 feet 8 inches in breadth, and 2 feet in thickness. The west pillar is 6 feet 6 inches high, 3 feet 7 inches broad, and 2 feet 3 inches thick. There are several fragments lying on the ground which appear to be the remains of three stones that once stood on the western arc of the circle, and a fourth stone is still standing at a distance of 85 feet north of the recumbent stone. The recumbent stone has also been broken, and two large portions of it are still lying where they fell, close to its base. Nothing is known locally of any excavations having been



Fig. 2. Frendraught Stone Circle from the south-west, showing fragments broken off Recumbent Stone.



Fig. 3. Stone Circle at Candle Hill, Insch. Recumbent Stone and fallen Pillar.
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made within the circle, nor of any remains having been found there, and doubtless the planting of its area with trees will have helped to destroy any such that may once have existed.

CANDLE HILL, INSCH; AND TOMNAVERIE, TARLAND.

In the description of the circle at Candle Hill, Inch, in vol. xxxvi. of the *Proceedings*, pp. 540-5, attention is drawn to what is evidently regarded as a peculiar feature of the circle, namely, a deep trench on the western side. This trench, however, has no real connection with the circle, but is simply a disused quarry, from which, many years ago, a large quantity of the stones used in the buildings and dykes on the farm were taken. The working of the quarry so close to the circle in all probability accounts for its dilapidated condition, for all the stones, with one exception, have fallen (fig. 3). A somewhat similar state of matters occurs at the Tomnaverie Circle, near Tarland, which has also a quarry on its western side. A few years ago one of the large standing-stones which stood near the edge of the quarry was undermined and fell, and it has now disappeared. If the working of the quarry is continued, a similar fate will doubtless soon overtake the remaining stones of the circle.

ELLON.

In the field on the north bank of the Ythan, a short distance to the west of the bridge over the river at Ellon, there are the remains of a small circle (fig. 4). The stones at present standing on the site are five in number, but only three of these belong to the circle, the other two having been brought in from other places. The stones average about 3 feet in height, and the distance between them seems to show that the circle could not much, if at all, have exceeded 20 feet in diameter.

Two of the stones stand at the southern and one at the northern side. The stone to the south-east measures 3 feet 6 inches in height, and is 2 feet 3 inches broad. The rounded pillar-like stone to the south-west is also 3 feet 6 inches high, but is only 1 foot 6 inches broad. The pointed stone at the northern side is somewhat smaller than the other two, as it measures only 2 feet 4 inches in height and 1 foot 6 inches in breadth. These are the three stones which belong to the original circle. The two rounded squat blocks in the centre are the stones which have been added to it in recent times. The more southerly of these is 2 feet high and 2 feet 6 inches broad, the other being of the same height but slightly broader. In the view shown in fig. 5, the



Fig. 4. Stone Circle at Ellon from the south.



Fig. 5. Stone Circle at Ellon from the west.

pointed pillar-stones which are parts of the original circle are clearly distinguishable from the rounded ones in the centre, which are the modern additions to it. Another circle is said to have stood at one time near the bank of the Ythan a little further down the stream, but no trace of it now remains.

POTTERTON, BELHELVIE.

Potterton House stands in the parish of Belhelvie, about 6 miles north of Aberdeen, and nearly a mile west of the main road between Aberdeen and Newburgh. The name Potterton is well known in Aberdeenshire, for the mill-pond on the estate is one of the few places in the district where the black-headed gull breeds, and from this fact these gulls are locally known as "Potterton hens."

The remains of the stone circle on the Potterton estate are, however, not so well known. This may be partly accounted for by the position of the circle. It stands on the top of a ridge on the home farm, and has a striking appearance when one is close to it. But, unfortunately, to the traveller on the main road it is only visible on the far-distant horizon, and thus it appears small and easily escapes notice. As the circle is approached the intervening ridges on one side and the woods on the other completely hide it, and it only appears again as the traveller gets close to it, along a not much frequented side-road.

The circle (fig. 6) is known as the Temple Stones, and the field in which it is situated is called the Temple Park. When complete the circle must have been a large and important one, but now only the recumbent stone and its accompanying pillars remain, and both the pillars have fallen. The recumbent stone is of a rectangular shape, and is apparently an ice-carried block, smoothed by friction on the outside, but rough and irregular on the inner side. It measures 9 feet at its greatest length; its height is 6 feet, and the thickness varies from 1 foot 6 inches to 4 feet 6 inches. The east pillar is 8 feet 6 inches long and 5 feet 6 inches broad, with a thickness varying from 1 foot to 2 feet 6 inches. The west pillar is 9 feet long, 4 feet 6 inches broad, and 1 foot 6 inches thick. There are two small cup-marks close together near the centre of the outside or southern face of the west pillar.

The recumbent stone, which faces the south, has at the base of its inner or northern side another stone lying at right angles to it (fig. 7). This stone is 4 feet 6 inches long and 3 feet broad, and it has an average thickness of about a foot. It is somewhat difficult to discover exactly what position this inner stone originally occupied in the circle. It may have been one of a pair of stones, similar to those found on the inner side of the recumbent stone in several of the Aberdeenshire circles—



Fig. 6. The Temple Stones Circle, Potterton, Bellhelvie. Recumbent Stone and Pillars from the south.

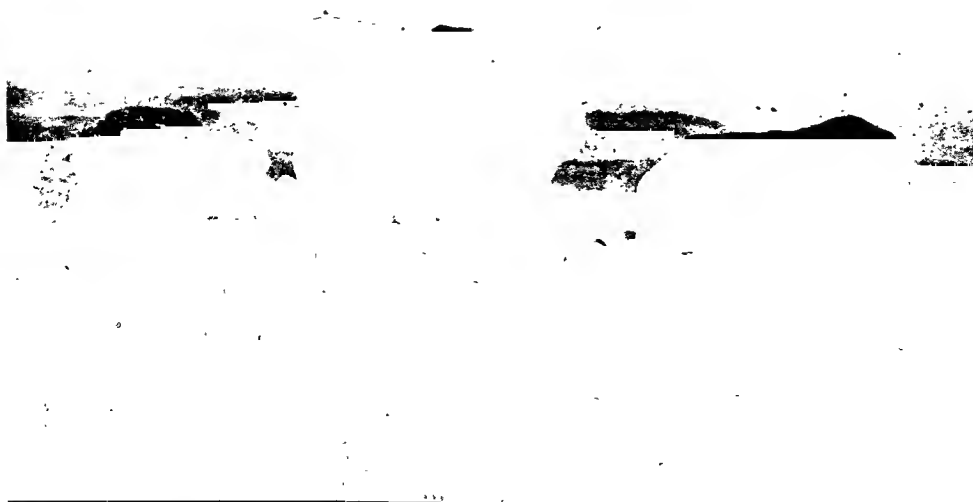


Fig. 7. The Temple Stones Circle, Potterton, Bellhelvie. Recumbent Stone and Pillars from the north.

such, for example, as those at Auquhorthies near Inverurie, and Ardlair near Kennethmont. But if so it must have fallen over on its side, and its companion stone must have disappeared. It seems more probable, therefore, that it is one of the standing-stones which formerly stood in the circumference of the circle, and that it was removed from its place, and thrown down in its present position, when the ground was being brought under cultivation.

It is unfortunate that none of the other standing-stones have been left in their original positions, for their removal has rendered it impossible now to gain a correct idea of the diameter of the circle, or of the number of stones of which it was composed. It must, however, have been both a large and important one, and the view from its site is extensive.

PEATHILL, KINKELL.

The farm of Peathill lies in the old parish of Kinkell, now joined to Keith Hall, and is about 4 miles south-east of Inverurie. There was once a circle on the farm, but now there remains only a single stone (fig. 8), 6 feet 7 inches high, standing in the middle of one of the fields to the north-east of the farm buildings. It is about half a mile south of the village of Kinmuck, where there is a post-office, and a small chapel and graveyard belonging to the Society of Friends. In this graveyard, just inside the wall on the west side, there may be seen an interesting relic of the resurrectionist times—an iron mortsafe formerly used to prevent the lifting of the bodies of those buried in the graveyard.

On p. 744 of vol. xxxix. of the *New Statistical Account*, quoted by Mr Coles in his report, it is said that "the corn grows very luxuriantly around this solitary pillar to a distance of 15 yards, and has always been 18 inches higher than the crop immediately beside it." This was written by Dr Keith, the parish minister of Keith Hall, and represents the state of matters round the stone about the year 1840. Since that date, however, the extra fertility of the soil has become exhausted, and for many years back there has been no difference between the crop in the vicinity of the stone and that on the rest of the field. The Peathill stone is now used as a rubbing-post for the cattle pasturing in the field, for which purpose, doubtless, it was left when the other stones belonging to the circle were removed. Several urns have been found in the neighbourhood of the Peathill stone.

CAIRNHALL AND FULARTON, KINTORE.

About half a mile north of Kintore railway station, on the west side of the main road leading to Inverurie and the north, the farm-

house and steading of Cairnhall are situated. There formerly stood in the field just in front of the farmhouse a circle, of which only a single stone about 5 feet high now remains (fig. 9). There were, till quite recently, two stones—the one still in position, and a fallen one; but the



Fig. 8. Standing Stone, remains of Circle, at Peathill, Kinkell.

latter, since the date of Mr Coles's report, has been broken up and removed to the neighbouring dyke because it interfered somewhat with agricultural operations. The one left standing has been preserved because it is useful as a rubbing-post for the cattle.

On the other side of the road, a short distance to the north-east, a small round plantation may be seen in the middle of the field. This marks the site of the Fularton circle, of which only a single stone

has been left. It may be observed standing upright in the dyke which forms the boundary of the plantation. Many human remains have been found at various times within the area of the Fularton circle.



Fig. 9. Standing Stone, remains of Circle, at Cairnhall, Kintore.

CHAPEL O' SINK, FETTERNEAR; AND THE SUNKEN KIRK, CLATT.

In the wood on the slope of the ridge just at the back of the farm of Westerton, on the estate of Fetternear, and about six miles from Inverurie, are to be seen the remains of a small circle which is known locally by the name of The Chapel o' Sink (fig. 10), commonly contracted into Chapel Sink. The name is said to have originated in the belief that Satan caused the stones used in building the chapel during the day to sink out of sight during the following night. A similar tradition

exists concerning The Sunken Kirk, a circle which stood on the farm of Tofthills in the parish of Clatt, but which has now been entirely removed, though the site is still known by its old name.

There are no tall pillar-stones now to be seen at the Chapel o' Sink; but if the stones of the farm buildings could speak, in all likelihood they would be able to tell what had become of them. What still exists appears to be the remains of an inner stone setting, with the majority of the stones standing only about a foot above the ground. This stone setting has been described as being of a rectangular form, but it appears to me to be rather of a circular, or perhaps elliptical, shape. Its rounded form is quite distinctly seen in the photograph. An old cart-track, which had formerly been used for removing trees from the wood, passes along one side of the circle, and has displaced several of the stones, thereby, no doubt, somewhat altering its appearance. The stones, too, are small, and during summer and autumn many of them are almost entirely hidden by the undergrowth of heather and rough grass. This circle, and indeed all our stone circles, should be visited, if possible, in spring, after the snows of winter have flattened the tall grasses and ferns, and before the new growth has had time to hide the smaller stones. The stone setting has a diameter of about 45 feet, and no doubt the diameter of the circle of pillar-stones, now removed, must have been considerably larger.

About 120 yards to the north-west of the Chapel o' Sink there lies a large square-shaped block of stone (fig. 11) built into the dyke forming the boundary of the plantation. It measures 4 feet in length, and 4 feet also in breadth, and its height varies from 1 foot 9 inches to 3 feet. It is known locally as "The Ark Stone," but why it got that name no one now knows. It has all the appearance of being the recumbent stone removed from the circle. If this surmise is correct, then the name would be easily accounted for. Its box-like shape, and its prominent position in the Chapel o' Sink, taken along with the idea so very prevalent in some quarters that these stone circles were heathen temples, would doubtless suggest the name "Ark Stone."

NETHER COULLIE, MONYMUSK.

The farm of Nether Coullie is in the parish of Monymusk, and near the north bank of the Don, barely two miles from Kemnay Station on the Alford branch of the Great North of Scotland Railway. At the side of the road, close to the northern boundary of the farm, there lies a huge stone, almost as large as a small cottage. It is known as The Greatstone, and has been deposited in its present position by the ice with which our country was at one time covered. There are many



Fig. 10. The Chapel o' Sink Stone Circle, Westerton, Fetternear.



Fig. 11. The Ark Stone, Chapel o' Sink, Westerton, Fetternear.

other ice-carried blocks to be seen in the neighbourhood of Kernay, which derives its name from the Kaims, a long line of glacial deposits stretching for several miles along the valley of the Don. These stones, however, are of no archæological interest, although in several instances

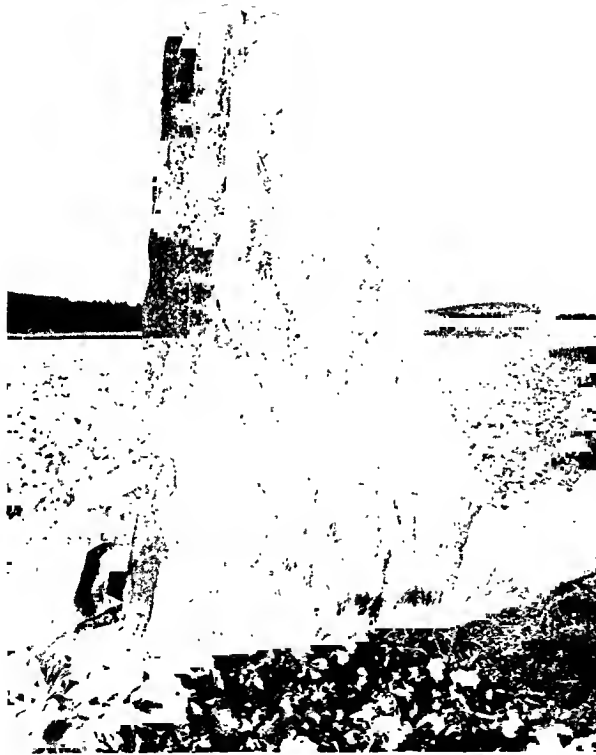


Fig. 12. Standing Stone, remains of Circle, at Nether Coullie, Monymusk.

their presence has been accounted for by legends which are current in the neighbourhood.

A stone of antiquarian interest, however, stands on the farm of Nether Coullie. In the Standing-Stones Field there is a tall pillar of dark grey granite veined with white quartz (fig. 12). It is 9 feet high, 5 feet in width at the base, and narrows gradually to a somewhat truncated top, the width about half way up being 3 feet 6 inches. Its

average thickness is only about 10 inches. This pillar is all that remains of a circle that originally had eight standing-stones. The remaining stones were removed by the farmer, with the proprietor's permission, about forty years ago, and the tall pillar-stone was left standing because it might be of use as a rubbing-post for the cattle which occasionally pastured in the field. The original diameter of the circle, as pointed out by Mr Connon, the tenant, was from 75 to 80 feet. At first it seemed



Fig. 13. Stones belonging to Nether Coullie Circle, Monymusk.

as if the Nether Coullie circle had been of a different type from the other circles in Aberdeenshire, for, according to Mr Connon's statement, the tall pillar stood in the centre of it, and there is no other circle having this characteristic now in existence in the county. Mr Connon very kindly accompanied me to the circle, and pointed out, as near as he could remember, the position of the various stones which had been removed. Then it became clear that the circle had really been one of the usual recumbent-stone type, and that the tall stone now remaining was the west pillar.

An interesting fact was brought to light during the further inspection

of this circle. Mr Common happened to mention that another stone, a little longer than the one still standing, lay buried in the ground a short distance to the south-east of it. This statement confirmed the surmise that the circle had been of the recumbent-stone type, for the buried stone was evidently the east pillar, fallen flat. It would naturally appear somewhat longer than the standing pillar, since its whole length was exposed, while the base of the standing stone was still hidden in the ground. As the fallen stone lay in a slight hollow (perhaps caused by the removal of the recumbent stone), and proved too heavy to be displaced, it was covered up with rubbish and soil from other parts of the farm, so that the plough could pass over it without obstruction. It is still lying where it fell, but constant cultivation of the overlying soil during the long period of over forty years has so effectually hidden it that we were unable to lay it bare. Probably it now lies further below the surface than we imagined, so that we did not probe deep enough, and therefore failed to find it.

The recumbent stone seems to have been removed at some date earlier than the destruction of the circle, for it was missing when the other stones were taken away, but the position of the pillar-stones seems to indicate that it faced the south-west.

Two of the stones removed from the circle may still be seen in the neighbouring dyke which bounds the road to the south of the circle (fig. 13). They are each about 3 feet 6 inches in height, and about the same in breadth.

The soil in the Standing-Stones Field is poor and thin, the result of "turfig" in the olden times, when it was a common practice to remove the rough heathery surface of the ground in the form of divots, which were used for fuel and other purposes.

TOMBEG, MONYMUSK.

Fully half a mile south-west of the village of Monymusk, in a small plantation on the west side of the farmhouse of Tombeg, there is a standing-stone which is said to be the remnant of a circle (fig. 14). The stone is 4 feet 6 inches in height, 2 feet 6 inches in breadth, and its thickness varies from 9 inches to 1 foot 6 inches, averaging about 1 foot. Twenty-four feet south of the standing-stone a smaller stone lies flat on the ground, but it is doubtful if it ever formed one of the uprights of the circle. There is nothing now left to indicate the original size of the circle, or the number of stones it contained when complete, and definite particulars concerning it seem not to be now available.

There is a curious tradition, however, concerning Tombeg, which, if founded on fact, may help to account for the state in which the

circle is now to be seen. The Rev. Wm. M. Macpherson, D.D., on p. 72 of his *History of the Church and Priory of Monymusk*, says: "The granite used in the building is not the same as the common blocks in the fields, or in recently opened quarries. The tradition is that it was taken



Fig. 14. Standing Stone at Tombeg, Monymusk.

from Tombeg farm, and that the stones were passed from hand to hand down the hill." This may mean that the loose blocks found lying on the hill were taken, or it may mean that the stones were quarried there. Probably both things happened, for there is a small quarry, not now used, lying close to the standing-stone. There does not appear to be any other quarry on the farm, so it is probably the spot from which the building material was taken, in part at least. It is easy to

understand, therefore, what has become of the other stones of the circle. The temptation to carry off suitable stones, standing ready for use, instead of having to dig them laboriously out of the quarry, would be too great for the workmen to resist, more especially if at the same time they thought that they were despoiling a "heathen temple" for the benefit of a Christian church. The single stone now remaining would, no doubt, be left as a rubbing-post, as has been done in so many other cases.

In the same plantation, not far from the northern side of the quarry, there once stood one of those whin-mills which were formerly used for the purpose of crushing whins or gorse into a pulp, suitable for food for the cattle and horses on the farm. The stone-lined circular course, and the central pin on which the shaft revolved, are still in their original positions, but the heavy round mill-stone lies just outside the garden wall, near the farmhouse.

KIMMONITY OR REDHILL

The circle called the Kimmonity Circle in vol. xxxvii. of the *Proceedings*, p. 132, appears to be that more generally known as the Redhill circle. It was destroyed many years ago, and no trace of it now remains. From the same neighbourhood came the sculptured stone found at North Redhill, and described in the *Early Christian Monuments of Scotland*, part iii. p. 154. It was removed from North Redhill a good many years ago, and now stands at Rothiemay House.

II.

INVESTIGATION OF THE ARTIFICIAL ISLAND IN LOCH KINELLAN.
STRATHPEFFER. BY HUGH A. FRASER, M.A., DINGWALL.

INTRODUCTION.

A Committee of the British Association was formed in 1910 to investigate, and ascertain the distribution of, artificial islands in the lochs of the Highlands of Scotland. The Committee consisted of Dr Robert Munro, the eminent Scottish authority on lake-dwellings, Professor G. L. Myres (Secretary), Professor T. H. Bryce, and Professor Boyd Dawkins.

The originator and chief promoter of the scheme for exploring the artificial islands in Highland lochs was the Rev. F. Odo Blundell, O.S.B., of St Benedict's Abbey, Fort Augustus.

Acting under Mr Blundell's directions, the British Association Committee decided that the first thing to be done was to obtain a preliminary survey of existing materials.

In response to informatory circulars sent to a large number of local antiquaries and others likely to be interested, a budget of replies was received containing valuable information culled from historical sources, local traditions, and personal observation, and conclusively proving that artificial islands were interspersed throughout almost all the lochs of the Highlands. In 1890 the list of localities in which crannogs were found, or in which their presence was indicated, amounted to 103.¹ The material obtained in response to Mr Blundell's circulars increased this number by 40 or 50 additional sites. All the information obtained is duly tabulated with all available details in three reports by Mr Blundell to the British Association for the years 1911, 1912, and 1913. In addition to these reports, Mr Blundell contributed valuable articles on the islands, with many photographic illustrations, to vols. xliii., xlv., and xlvii. of the *Proceedings of the Society of Antiquaries of Scotland*.

These papers completed the survey of the existing insular material, without taking into account the crannogs that are entirely submerged.

The next stage in the inquiry was to fix on an island for detailed investigation. After due deliberation, the crannog in Loch Kinellan, near Strathpeffer, Ross-shire, was decided upon. But practical archaeology is an expensive business, and the British Association Committee could not face the proposed excavation with merely the sum received from the Association. This difficulty was temporarily overcome by a

¹ *Lake-Dwellings of Europe*, pp. 442-449.

small grant from the Carnegie Research Fund of 1913-1914, made to Dr Munro, Chairman of the Committee. Unfortunately, shortly after, Dr Munro retired from the Committee on account of the state of his health.

Owing to the lateness of the season and other causes, no action was taken in 1913 under the Carnegie Grant. In August 1914 Dr Munro received a communication from the Carnegie Research Fund that the grant would lapse unless operations were carried out that season. As neither the Chairman nor the Secretary of the British Association Committee could undertake the work, Dr Munro, as grantee of the fund, was placed in a dilemma. In the circumstances, he arranged with Mr Odo Blundell, who had all along been the active agent in the investigations, to start operations, while he himself, though not yet fully recovered from his illness, was to join him later on.

But the Great War had broken out, and Mr Blundell received orders to hold himself in readiness to join the Fleet as a Chaplain. He thereupon wrote to the present writer, who had already done research work on the crannogs in the Dingwall district, to assist him in the investigation and, if necessary, to take charge. When I joined Mr Blundell, his duties with the Fleet had already commenced, and the time he could give to the investigation of the island was uncertain. He accordingly asked me to undertake the supervision of the excavations from the outset. As I had to resume my scholastic duties almost immediately, I had to arrange to execute the work in the few days available.

A week later Dr Munro arrived, and by his directions further excavations were made with a view to obtaining relics that would give some clue to the age of the island. This part of the work I could supervise only after school hours.

A short interim report by Dr Munro on the work done was sent to the Secretary of the Carnegie Research Fund in October 1914. The report also appeared in the *Glasgow Herald* of 9th January 1915, as part of an interesting article by Dr Munro on Scottish crannogs. I am indebted to Dr Munro's article for most of the foregoing facts.

On examining the materials for a detailed report, and more particularly on revisiting the island, I was persuaded that more could be gleaned from the excavations than had yet been done, the latter part of the work especially having been but partly supervised. As only Saturdays were available to me, and as preparation had now to be made for coping with the lake water which had percolated into the excavations to a depth of several feet, I was ultimately forced, after having worked on the island in snow and frost, to abandon the completion of the investigation until the summer of 1915.

I resumed operations in July 1915, and obtained results which, I think, amply justified the postponement. Just as I was on the point of completing the work, having already arranged for the excavations to be filled in, I discovered a dug-out canoe as an underlying support of a portion of the woodwork in one of the pits. This I determined to attempt to recover. •

But it was now winter, and, although I had for several Saturdays the assistance of a number of friends, who worked knee-deep in liquid mud, I was compelled once more to postpone the completion of the investigation.

In July 1916 the canoe was secured, and the work on the island, for the time being at any rate, brought to a close.

On the further work done on the island being brought to the notice of the Carnegie Trustees, they renewed their grant for two additional years, thus relieving the principal investigator of somewhat heavy incidental expenses.

HISTORICAL NOTES.

Loch Kinellan is a small lake situated about a mile south-west of the village of Strathpeffer. But for its surroundings it might be described as a mountain tarn occupying a scooped-out hollow in a small glacial valley; the neighbouring scenery makes it a gem in a picturesque setting. The island which is the subject of this report, situated near the southern shore, adds to the beauty of the scene, and this is further enhanced in the summer and autumn months by a luxuriant growth of bulrushes at the west end of the lake, and in the lee of the island (fig. 1).

The crannog is of historical interest. It was for long a hunting-seat of the Earls of Ross. It was to Kinellan that William, fourth Earl of Ross, invited King Robert the Bruce "to kill a buck in his company," after the King and the Earl had adjusted their differences at Auldearn. In 1476 the Earldom of Ross was irrevocably annexed to the Crown. The "management of its rent" was entrusted by the King to the Earl of Sutherland, who transferred the trust to Alexander Mackenzie of Kintail, sixth chief of the Mackenzies. As this necessitated his being often "in the low countries," Alexander chose Kinellan, "a secure place," "ane island in ane loch," for his abode, with Brahan as a mains. He does not seem to have been long at Kinellan when his son Kenneth (Coinneach a' Bhlàir) contrived to quarrel with the Macdonalds. Trusting that the men of the Isles would be unwilling to invade Ross, Kenneth stayed at Kinellan, where his father "abod in the little ille, and Kenneth and such as he haid with him lay at the lochsyd, in a secure ground."

It turned out that the Macdonalds had no "unwillingness to invade Ross," and Kenneth had to make preparations to receive them. Fearing that the Macdonalds might besiege the island in Loch Kinellan, Kenneth persuaded his aged father to go for safety to the Raven's Rock, some miles to the north. Kenneth himself sallied forth with his men to meet the Macdonalds, on whom he inflicted thorough and condign punishment at the battle of Park close by, thereafter returning in triumph to Kinellan.

Alexander Mackenzie came to reside at Kinellan about 1485. He died there in 1488.



Fig. 1. Kinellan Island from south-west in summer.

Alexander was succeeded by his son Kenneth, who held sway as chief for only three years. He died at Kinellan in 1491.

Kenneth's eldest son and successor, "Kenneth the Younger," was a "man of great spirits and reckless habits." He was apprehended by order of James IV. in 1495, and kept in confinement in Edinburgh Castle. He escaped in 1497, and while making his way to the north was killed by the Laird of Buchannan.

"Kenneth the Younger's" mother seems to have continued to reside at Kinellan after her husband's death, for there is a reference to the lands of Kinellan in connection with a cattle raid on the "Lady of Seaforth" in 1494. Possibly to that event may be ascribed the tradition that the Lady of Seaforth was carried off from Kinellan by a party of Munros, who, however, were "overtaken near Castle Leod by the Mackenzies, and defeated with great slaughter."

Kenneth the Younger was succeeded by his half-brother John of Killin, a minor. His uncle Hector Roy, the progenitor of the Gairloch family, who had administered the estates during "Kenneth the Younger's" minority and captivity, seems to have been determined to retain possession of them. He objected to the legitimacy of John of Killin's claim, and "continued to possess Kinellan as a rentler as his father Alexander had done." This led to the battle of Bealach nan Còr (a pass to the south of the village of Strathpeffer), fought between the Mackenzies and Munros in, or shortly after, 1500. At that time the headquarters of the Mackenzies were at Kinellan, so that for fifteen years at least the island home was their principal place of residence.

How long, subsequent to the battle of Bealach nan Còr, Hector Roy continued to stay at Kinellan is difficult to determine, but when approached by his nephew in 1507 to give up his claim to the estates he was residing at Wester Fairburn.

There is no evidence that Kinellan was at any later period used by the Mackenzies of Kintail as a family seat. The property, which was held at first by them as "rentlers of the King," was feued by Sir Colin Mackenzie of Kintail, who became chief in 1568. In 1745 we find it in possession of Alexander Mackenzie of Ardloch and Kinellan, brother of the first Earl of Cromartie, and grandson of Sir Roderick Mackenzie, the famous Tutor of Kintail. Thereafter the property came into the possession of the Mackenzies of Coul, who still retain it.

In the nineteenth century the island was, under different tenants, used as a kitchen garden. A number of fruit trees still growing upon it are evidence of this somewhat ignoble use, while the rich crop of nettles that mantles its surface season after season is further eloquent of its departed glory.

The *New Statistical Account*¹ has the following references to the crannog:—

"Loch Kinellan is also a pleasing object with its pretty little island (for many years a garden), and the fine arable fields on one side contrast strikingly with the wilder scenery on the other."

"In Lake Kinellan stands an artificial island, resting upon logs of oak, in which the family of Seaforth had at one period a house of strength."²

It remains to be said that Loch Kinellan and its island figured largely in the traditions of the district, but it does not appear to have been a matter of common knowledge that the island was artificial.

¹ *New Statistical Account*, vol. xvi., Ross and Cromarty, Contin, p. 236.

² *Ibid.*, p. 237.

INVESTIGATION BY MR BLUNDELL AND MR FRASER.

The main aims of the investigation were to determine whether or not the island is really artificial, and, if possible, to determine its age.

The preliminary arrangements were made by the Rev. F. Odo Blundell, O.S.B., Fort Augustus, who spent a whole day in finding men for digging operations and in procuring a boat with which to gain access to the island.

The scarcity of labour consequent on the outbreak of war made men difficult to obtain, but Mr Blundell's enthusiasm brooks no denial,



Fig. 2. Kinellan Island from south in winter, showing barrier of stones.

and late in the evening two suitable men were got. A boat was kindly lent by Mr Wallace, managing director of the Spa Hotel, Strathpeffer.

When Mr Blundell and the present writer arrived at the island in the forenoon of Tuesday, 25th August, the men had already been busy laying low the exuberant growth of nettles which covered the crannog. The island we found to be irregularly elliptical in shape, its major and minor axes measuring respectively 70 yards and 47 yards (figs. 2 and 3). Along the whole of its perimeter is a barrier of stones which do not appear to have been laid down with any great care. There is no appearance of even the roughest form of masonry. The barrier is highest at the west end of the island; at the east end the stones are all but covered when the loch is at its maximum height. At the west

end of the island, and extending round for some distance along the northern side, is a second barrier of stones partly overgrown. This second barrier is at a distance of about 15 feet from the shore barrier, and may have been intended to shelter the island from the west winds, which are the prevailing winds in the district and those to which the island is most exposed. The surface of the island shows a gentle slope from west to east, the average height at the former end being 4 feet 6 inches above the mean level of the loch, and at the latter 2 feet 6 inches. A hoary ash tree grows near the northern shore; several graceful birch trees adorn the south-eastern part of the island; the fruit trees already referred to we found to be damson and plum trees. Along parts of the stony barrier currant bushes contrive to flourish.

We determined to begin the excavations by sinking a pit in the centre of the island (fig. 3). There was first encountered about 15 inches of black soil containing several bones very much decayed. Then followed about 9 inches of clayey gravel, which the workmen insisted was there since the beginning of time! Next came two bands of mould alternating with bands of clay each about an inch in thickness. Underneath was a layer of clay 12 inches in depth, in which were embedded large stones. Underlying this again were 4 inches of vegetable humus which was almost peaty in parts, and which contained pieces of hazel twigs and fragments of hazel nuts. Brushwood debris was next met with, and on its being carefully removed a layer was found of logs lying closely together in an east-and-west direction. The wood was exceedingly soft and decomposed. It was almost impossible to manipulate it with a spade without reducing it to a peaty mass. The logs were about 10 inches in diameter. Underneath the uncovered logs, and lying parallel with them, was a second layer. A crowbar forced vertically downwards appeared to travel through wood for 2 feet, and then through peat or soft humus until a solid foundation was got 4 feet 6 inches below the level of the logs.

Several pieces of pottery were found in course of the digging, one of them a piece of delft of probably seventeenth- or eighteenth-century manufacture. At a depth of 3 feet 6 inches was found a piece of iron so corroded that it was impossible to say what it had been used for.

It was next decided to dig trenches along the major and minor axes of the island (fig. 3).

While the workmen were clearing away the surface soil for a trench that was to lead southwards from the centre pit, I thought I detected part of the foundation of a wall some 6 feet thick. I immediately set the men to dig at each side of it, and asked each of them to make a pit about 6 feet square. I observed that in the trial pit, water had

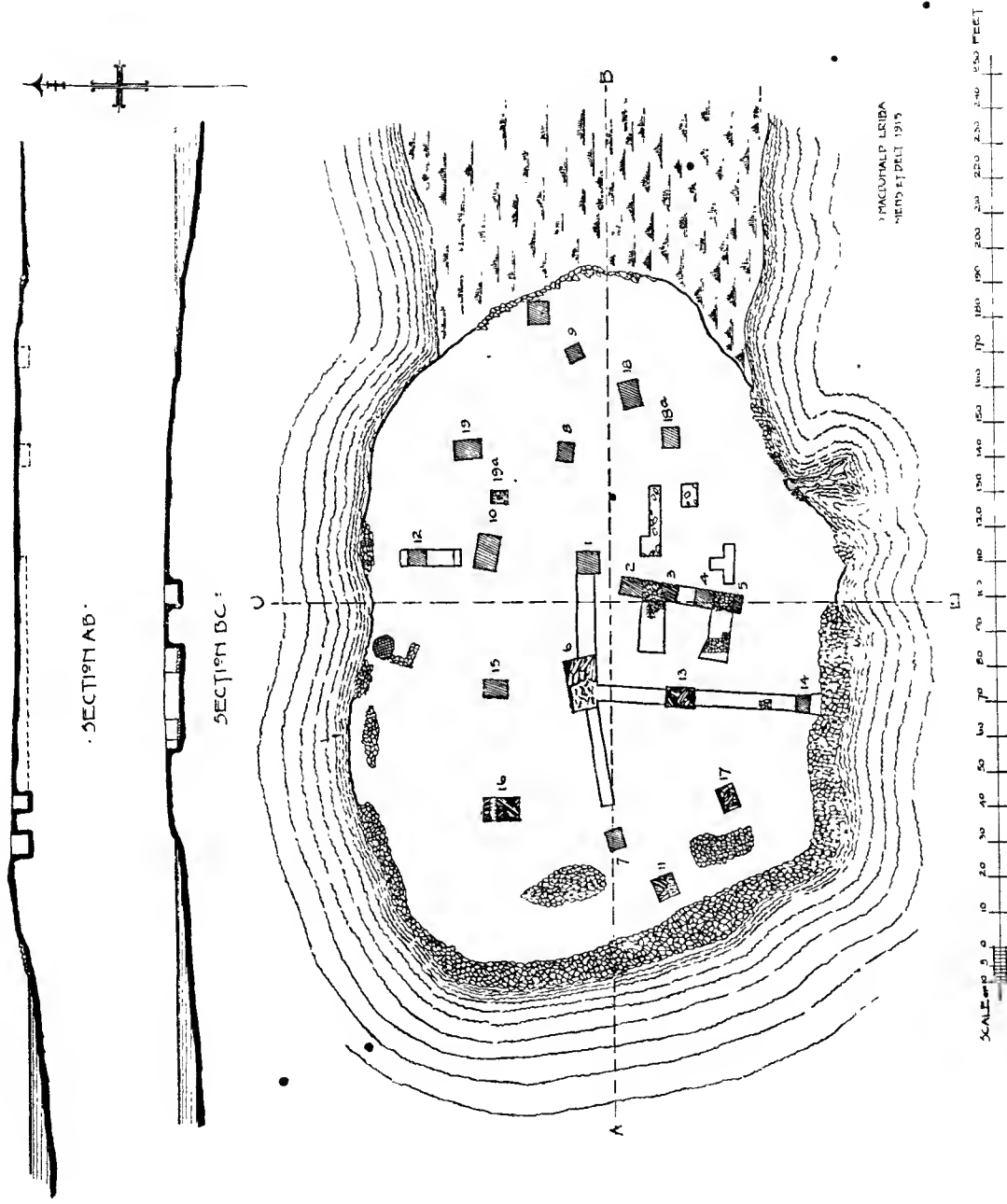


Fig. 3. Plan and sections of Island, showing trenches and pits.

oozed in from the surrounding soil and now filled the pit to a depth of several inches. As the same thing happened in the case of the second and third pits, I decided to abandon the idea of cross trenches and to sink pits instead. Without pumping appliances it would be impossible to control the water in long trenches. The scheme of pits I decided on consisted of those marked 1 to 11 in the plan (fig. 3).

Pit No. 2.—This pit gave a section corresponding roughly to No. 1—black earth, clay, boulders and clay, and peaty soil with wood underneath. The wood in the pit was of the nature of brushwood, and did not show any definite arrangement.

Underneath the boulder layer and overlying the peaty soil was a seam of about 1 inch of reddish material. On examination it appeared to consist of baked clay, with which were intermingled pieces of pottery.

Shards of pottery were got in quantity, particularly at the level of the baked-clay seam. At a depth of three feet was found a brown fragment beautifully glazed, which could easily pass for a piece of a twentieth-century teapot.

The pit yielded a number of bones.

In the course of the digging was got, 18 inches down, one of the two examples of dressed stone found in the course of the excavations—a piece of gneiss, a fragment of either a checked jamb or of a stone through which a square hole had been bored. The only part which shows tool-working is the checking or hole. If it was a jamb, the stone was not placed on its natural bedding (fig. 4).

Pit No. 3.—When the surface soil for this pit was cleared away, there was found the second portion of dressed stone just referred to. It is a rectangular piece of sandstone 19 inches by 7 inches by 4 inches, and is evidently part of a larger stone. The upper surface and one end are carefully chiselled, different tools having been used for each. On the upper surface is part of what was probably a hexagonal recess, which from its rough finish was almost certainly covered. It may have been the base of a hexagonal pillar (fig. 4).

The surface soil was followed by a layer of brittle puddled clay, which the workmen dubbed "pan." Underneath was a further layer of fairly compact clay with which were associated a blackish, sooty-looking powder, and reddish, ashy-looking stuff. Next came 12 inches of hard, compact clay overlying a layer of boulders. Below the boulders was a seam of baked clay similar to that obtained in Pit No. 2. Beneath this again were 9 inches of peaty soil unmistakably mossy in character. Wood was met with at a depth of 4 feet.

A large number of fragments of pottery were got, for the most part associated with the seam of baked clay.

Pits 2 and 3 having been dug out, there was little doubt that the foundation of a wall was exposed between them. It consisted of unhewn stones of varying sizes embedded in clay, and measured 6 feet across. I immediately set the men to look for a foundation to correspond with the one exposed. This was found 14 feet to the south, the distance being measured from the inner sides. Pits were sunk on each side of this foundation also (fig. 3).

Pit No. 4.—As a measured section of this pit will be fully described in a later portion of the report, it will suffice at this stage to say that the layers encountered corresponded generally to those met with in Pit 3. The peat at the bottom of the pit was well formed. It exuded



Fig. 4. Finds: Worked Stone (including a portion of a quern) and Iron Staple.

the characteristic smell of the peat bog. The substances that went to form the peat seemed to be mainly heather, moss, and brushwood debris.

The pit yielded its quota of bones and pottery shards. Three feet down was found a knob-like piece of bone, probably the head of a femur, with a hole $\frac{3}{10}$ inch in diameter through the centre (fig. 7). A portion of a wooden vessel was got at a depth of 4 feet. It showed part of the bottom and of the sloping side. The surface was very finely finished. It looked like a fragment of a bowl or trencher. It was exceedingly soft, and despite every care defied preservation.

Pit No. 5.—The surface soil was followed by about 2 feet 6 inches of blackish earth and clay. Timber was encountered at a depth of 3 feet 6 inches, and for the first time a pile was seen. It was cylindrical in shape and about 6 inches in diameter.

A number of pieces of pointed wood were found at a depth of 2 feet.

The workmen considered them roes' horns, a description that gives a fair idea of their size and shape. On a slice being cut off one of them it was found to smell strongly of pine. When dried it burnt readily with a lurid hydro-carbon flame and with the emission of dense volumes of smoke. These pieces of hard, highly resinous wood are undoubtedly fir nodules, obtained most probably in some neighbouring peat bog, and used perhaps as prongs for some purpose or other, or quite conceivably as thatch pegs (fig. 5).

Perhaps the most interesting find of all from the relic-hunter's point of view was made in this pit at a depth of 3 feet 6 inches—a piece of carved ivory, cylindrical in form, $1\frac{1}{2}$ inch high and $\frac{1}{2}$ inch in diameter. It carries a shield with a cross engrailed, probably the arms of the



Fig. 5. Fir Nodules found at a depth of 2 feet.



Fig. 6. Piece of Carved Ivory, probably a Playing Piece.

Sinclair family. It may have been used as a playing piece for chess or backgammon (fig. 6).

Pit 5 yielded but one bone and three shards of pottery. The seam of baked clay met with in Pits 2, 3, and 4 was found in this pit also, and is most probably the same seam as was discovered by Mr Corbet of Kinellan, tenant of the island, in a trial pit he made in 1910, situated in line with the foregoing pits, and about 20 feet from the water-line. Mr Corbet describes it as a "layer of sand consisting mainly of white sand and broken pottery."¹

Pit No. 6.—In the pits dug so far, water oozed in more or less rapidly before the woodwork could be properly exposed. In No. 6 the timber was well above the water-level, and the logs could be examined with ease. There were three oak beams of rectangular section and with clean-cut ends lying in an east-and-west direction, an inch or two apart from each other. They had a downward tilt to the east, and

¹ *Proceedings of the Society of Antiquaries of Scotland*, vol. xlvii. p. 274.

were overlaid by one or two pieces of timber lying in a north-and-south direction. On passing the hand down between the beams a second set was encountered lying at right angles to those exposed. The beams measured 10 inches in width and 4 in thickness (figs. 9 and 13).

The section of No. 6 gave 18 inches of black earth followed by 1 foot of dark loam and 9 inches of peat.

In the pit were found a piece of diorite so decomposed by the surrounding humus as to be easily powdered, and one or two pieces of peaty soil covered with a whitish accretion resembling tallow.

Pit No. 7.—This pit, dug near the ridge of stones that lies parallel to the western shore, at a distance from it of about 30 feet, proved unique in that continued efforts failed to locate any wood. At a depth of 6 feet some traces of wood were found, but nothing to indicate a platform of logs or of brushwood, as met with in all the other pits. Below the surface soil, stones were encountered the whole way down, with black earth interspersed in places. The digging of the pit had ultimately to be abandoned. Not only did percolating water become troublesome, but it was found impossible to negotiate the large stones without suitable tackle.

About 18 inches from the top some pieces of lime mortar were found. Two fragments of pottery were got at a depth of 2 feet. About 30 inches down several pieces of charcoal and of calcined bone were obtained, while at 4 feet below the surface wood cinders were met with in quantity.

A hone-shaped piece of sandstone, 5 inches by $1\frac{1}{4}$ inch, got at 3 feet, and a kidney-shaped piece of quartzite, measuring $3\frac{1}{2}$ inches by 3 inches, with a thickness of 1 inch, found at a depth of 4 feet, show unmistakable signs of having been used as polishers. Two stones found by Dr Munro in Lochan Dughall near Kintyre appear to be very similar (fig. 7).¹

Pit No. 8.—One side of No. 8 yielded black earth nearly all the way down, while the opposite side gave, under the surface soil, clay with many large boulders. At a depth of about 3 feet 6 inches a rich black loam was encountered which was declared by the workmen to be "fat." Underneath it was a band of soft blue clay overlying a layer of peat. The peat on being cleared away exposed brushwood at a depth of 4 feet, with a small pile at one end.

The pit yielded 15 shards of pottery and 25 bones. Both pottery and bones were found throughout. At one part, about 3 feet down, the bones had so decayed as to form fine bone-dust. A small quantity of lime mortar was got at 2 feet 6 inches. Charcoal was met with at 30 inches, and again in quantity at 4 feet, associated with ashes and

¹ *Proceedings of the Society of Antiquaries of Scotland*, vol. xxvii. p. 218.

pieces of bark. Two iron nails, very much oxidised, were got immediately over the large stones above the clay and peat bands.

Pit No. 9.—The pit gave a section that, in view of the latter part of the investigations of the crannog, is full of significance—1 foot 3 inches of black earth, 1 foot of clay with large stones, 2 feet of peat, 6 inches of clay, 2 inches of peat, 3 inches of bluish clay, and 4 inches of peat with brush-wood underlying it at a depth of 3 feet 8 inches from the surface. In this pit also a small pile was seen.

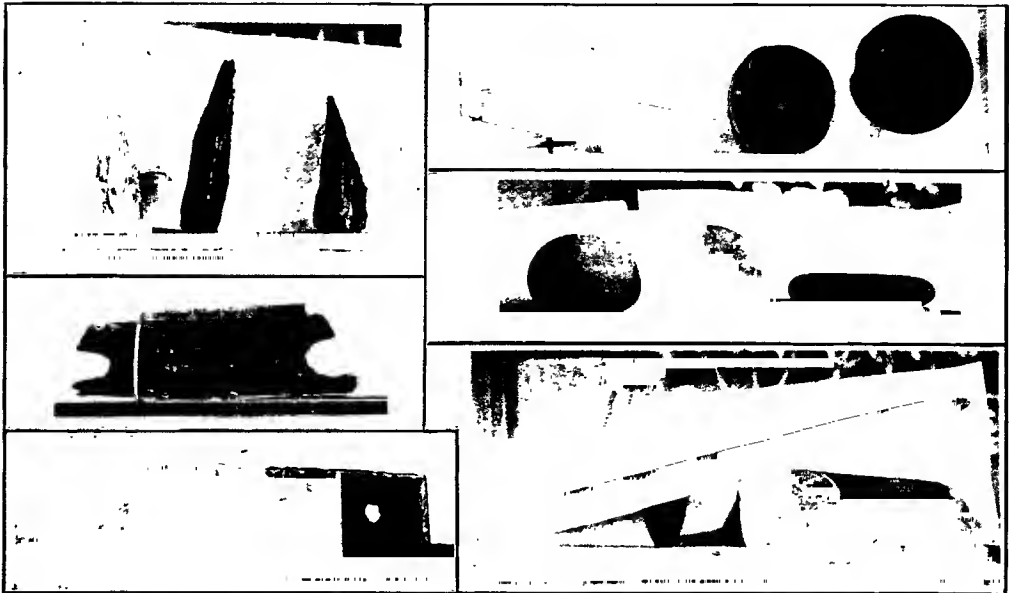


Fig. 7. Finds.

Rough Wedges—Pit 13.
Tie-piece—Pit 13.
Tie-piece—Pit 10.

Slick-stone, Whorl of Shale, Bone Whorl.
Pot-boiler, Kidney-shaped Polisher, Hone-
shaped Polisher.
Pegs.

An interesting find consisted of lumps of half-baked clay. The soft clay interbedded with the two bands of peat at the bottom contained charcoal.

Pit No. 10.—In this pit habitation refuse was found in such profusion that it was christened the kitchen midden.

The foot or so of surface soil was followed by a foot of clay with large stones, beneath which were found red baked clay in lumps, charcoal, and cinders. Next came about a foot of dark soil rich in humus. At a depth of 3 feet the workmen came upon a layer of brush-

wood, which was followed by layers of occupation refuse with clay interbedded. Matted straw; compressed reeds, brackens, and moss; brushwood and wood chips; hazel twigs, leaves and bark; heather; peat, yellow and black, formed and forming; bones of animals, whole and split, with some of them bleached by the surrounding peat; bones of fish and of fowls; and hazel-nut shells, were thrown up in profusion. This seemingly heterogeneous mass was obtained until the workmen had to desist at a depth of over 6 feet, owing to the incoming water.

Sixteen shards of pottery were got. Three of them, found comparatively near the surface, and a fourth piece, obtained in Pit 2, 40 feet away, fitted together to form a handle that materially assisted Mr Curle, Director of the Scottish National Museum of Antiquities, in making the restoration illustrated in fig. 8.

Part of a tree stool, much decayed, lay horizontally at a depth of 3 feet, a depth corresponding to that at which timber was found in the "beam" pits. Slightly lower, and in an upright position, was the end of a post or pile, finely pointed and with a diameter of 6 inches. A piece of oak board 2 feet 3 inches by 6 inches by $1\frac{1}{2}$ inch lay at a depth of 3 feet, and appeared to have been carefully placed in a horizontal position (fig. 7). The upper surface is bevelled along one side and both ends. This board has cut in it two irregularly circular holes of about $1\frac{1}{2}$ inch in diameter, one near each end, and inclined towards each other. In it are three smithy-made nails, square in section, with flat heads 1 inch across. One of them had evidently been short for its purpose, for a rough triangular recess had been cut in the board to enable the nail to be driven further home. A fourth nail which is missing had split the wood; the hole gives a square section of $\frac{3}{16}$ inch side. At a depth of 3 feet 6 inches, in peaty soil, was got a piece of well-squared oak, the end of which shows neat saw-work. It is evidently a portion which was split off from the end of a post in driving it. At that part at any rate the post was not shaped with the grain of the wood. A runnel-like piece of elder about 3 inches long was found at a depth of 3 feet. It had quite manifestly been fashioned for some purpose. A pointed hazel peg which had been hardened in the fire was got at 5 feet 6 inches. Two shreds of sacking were got well down in the pit.



Fig. 8. Diagrammatic restoration of the type of vessel in use. About $\frac{1}{2}$ actual size.

A small piece of undressed leather found at 3 feet 6 inches belonged probably to horse harness. A piece from a depth of 5 feet looked like either a holster or sporran flap, or a portion of the upper part of a brogue. It is made of fine thin leather, backed with stouter undressed leather. The edges of the surface leather are scalloped, the indentations being at regular intervals. The stitching was of the "half-through" variety. It contains a buttonhole, the signs of friction on which show the button to have been spherical in shape. A piece of iron which had been subjected to prolonged heating, and was now practically a lump of hæmatite, was got at 2 feet beneath a layer of clay, 9 inches deep, underlying the surface soil, while a piece of much corroded iron was found in a pocket of sand 2 feet below the surface.

A number of calcined bones were got in the pit. About 27 inches down was a layer of a conglomerate of clay, ashes, and wood cinders.

At a depth of 5 feet there was exposed the tail end of the backbone of a large fish, a splendid instance of a fossil in the making. At 3 feet and again at 5 feet a number of oyster shells were found.

Pit No. 11 was not nearly so difficult to dig as its neighbour No. 7. Stones and earth were encountered for about 2 feet 6 inches, and then a soft clayey loam. Logs were got at 4 feet 6 inches with a thin seam of peat overlying them. An iron bar which looked like a window weight was got at a depth of 1 foot, and at the same depth some bones were found. A piece of a stag's antler was obtained 4 feet below the surface. From the appearance of the fragment, the antler must have been a large and handsome one.

This finished the work I had mapped out for the time at my disposal. As, however, Dr Munro was expected north in a few days' time, I delayed filling in the pits again until his arrival.

INVESTIGATION BY MR FRASER AND DR MUNRO.

On visiting the island, Dr Munro, while approving generally of the work done, expressed a desire to have the men re-engaged (1) to trace out the foundations, of which only two parts were so far exposed; (2) to run surface trenches across the island to see whether the foundations of other buildings were to be met with; (3) to dig more pits with a view to finding relics that would give some authoritative clue to the age of the island.

The tracing of the foundations revealed a rectangular building 18 feet by 28 feet with some indication of wings (see plan, fig. 3, p. 55). The foundations were less than a foot below the surface, and were constructed of unhewn stones and clay. In the course of the digging the

workmen found a number of pegs similar to those obtained in Pit 5 (fig. 5). At the north-west corner of the rectangular site, and just underneath the black earth, a seam of fired clay was exposed. Pieces of baked clay were got at the extreme east end of the foundation trenches, along with lumps of clay of a bluish colour. A number of shards of pottery were got, several of them made of indifferent clay, and showing rough glazing.

The surface trenches yielded little evidence of any importance, and the digging of them was abandoned. In one of the trenches near Pit No. 14 was exposed a peculiar arrangement of large stones (fig. 3). The space enclosed by the stones contained pieces of charcoal. Near the north end of the same trench was found part of the upper stone of a quern made of micaceous schist (fig. 4). Near by was got a quantity of charcoal in large pieces. More charcoal, also in large pieces, was found in the trench running westwards from Pit 6, and also a bone button which was obviously of quite modern manufacture. The trenches yielded a quantity of small pieces of pottery similar to those found at lower depths, and one or two pieces of modern make.

The additional pits dug were those marked 12 to 19 on the plan (fig. 3). It is unnecessary to go minutely into the sections of these pits; they correspond generally to those already described.

Timber was exposed in Nos. 13, 15, 16, 17, at an average depth of 5 feet, Pits 6 and 16 giving particularly good exposures (figs. 9 and 10), while brushwood such as was encountered in Pits 8 and 9 was met with in Nos. 18 and 19.

In Pit 18 quantities of moss associated with brushwood and habitation debris were thrown out from a depth of 3 feet downwards. Some of the moss looked almost fresh in appearance, and retained much of its original colour. Pit 15 yielded at a depth of 4 feet masses of brushwood packed with pulled heather and moss, the whole forming a layer from 4 to 6 inches in thickness. When dry the junks were quite like turfs of partly formed peat containing much wood. The heather and moss forming the "packing" crumbled readily to the touch, yielding a fine powder and masses of fibre. In a corner of the pit the end of a pile 9 inches square was found. In Pit 17 there was met, to begin with, a mass of stones similar to those in Pit 7. In this case, however, the stones overlay bands of clay and peat. Charcoal was got at 2 feet 6 inches, and a seam of red burnt clay at 3 feet. The woodwork at the bottom consisted of sapling stems of a few inches diameter, one or two of the stems being split (figs. 12, 15 XVI., and 23).

In Pit 19 was found a nicely shaped oak peg, 18 inches long and neatly pointed (fig. 7); and a portion of a strap, $\frac{1}{10}$ inch wide, of thin

leather, with punched holes. Two small pieces of board were got, one of which, showing signs of a circular hole, was probably part of a stave. One or two fragments of oyster shells were obtained, and a spherical stone with a flat base, which may have been used as a pot-boiler (fig. 7).

No. 18 yielded a profusion of brushwood and axe debris. Woodchips and pieces of bark were thrown up in abundance, gaining for the pit the sobriquet of "the backyard." A block of oak, 18 inches by



Fig. 9. Pit 6: Diagrammatic Sketch of Woodwork.

6 inches by $4\frac{1}{2}$ inches, bore evidence in one of its faces of having been split from a larger beam. In the split face was a scooped-out hollow, part of what had been a hole of $1\frac{1}{2}$ inch diameter sunk into the wood to a depth of 4 inches. The sides of the hole were smooth and the bottom hemispherical in section. A piece of board 15 inches by 6 inches by $\frac{3}{4}$ inch, tapering at one end, and with one edge thicker than the other, was in all likelihood a stave. Another piece, 15 inches by 5 inches by $1\frac{1}{4}$ inch had a peculiar indentation in the centre, which, however, may have been the result of pressure on the soft decaying wood. A further piece, 14 inches by 3 inches by $1\frac{1}{2}$ inch was, from

its weight and state of decay, evidently formed of light wood of loose texture. Two oak pegs were got—one, unpointed, measuring 15 inches by $1\frac{1}{4}$ inch by $\frac{3}{4}$ inch, and the other, thin and wedge-shaped, measuring 13 inches in length. The pit contained a number of large chips showing clear evidence of saw and hatchet work.

Pit 14 yielded habitation debris in the shape of fired clay and a piece

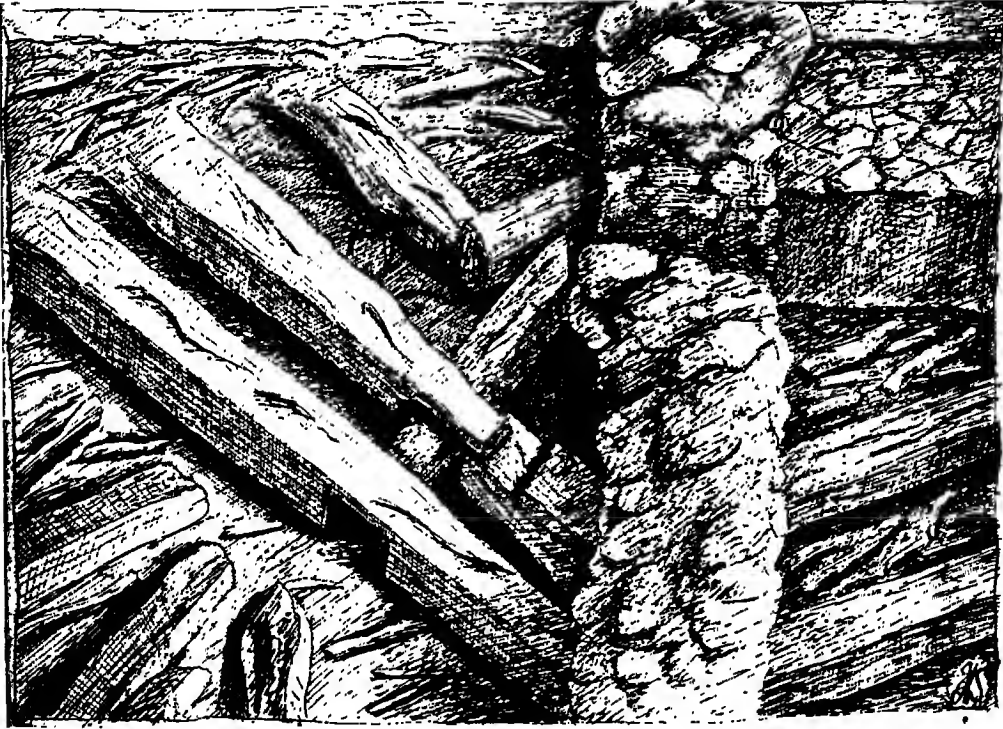


Fig. 10. Pit 16: Diagrammatic sketch showing Woodwork, base of Stone Wall, and portion of rough Causeway.

of sandstone with slight signs of vitrification; hazel nuts, whole and broken; calcined bones and charcoal; wood chips, pieces of bark, and leaves. There were also got an oak peg 10 inches long, four-sided, tapering towards one end, which was sharpened in chisel-edge fashion, the other end being rounded; and two stone implements. One of the latter is a slick-stone of quartzite beautifully shaped, and very finely finished; the other is an irregularly circular piece of local shale perforated in the centre, and measuring $1\frac{3}{10}$ inch across, with a thickness of $\frac{1}{5}$ inch (fig. 7).

Pit 15 contained a small seam of whitish material which looked like run lime or white ashes. It felt smooth to the touch, distinctly like fuller's earth. On being treated with hydrochloric acid it effervesced with a brisk evolution of carbon dioxide gas.

In Pit 16 were got three iron nails similar to those contained in the board described on p. 61. They are 3 inches in length.

Bones were found in Pits 14, 15, 16, 18, and 19, and pottery shards in Pits 15, 16, 18, and 19. One piece of pottery from Pit 18 showed the appearance and texture of the pieces of glazed pottery got in the foundation trench (see p. 63), and the shape of shoulder and neck figured in Mr Curle's restoration (fig. 8). A piece of handle found in Pit 16 shows the same type as the handle in the same restoration. Several of the pieces from Pit 19 were of very modern manufacture.

INVESTIGATION BY MR FRASER.

Before filling in the pits I decided to examine the bottoms of some of them carefully to see whether anything could be ascertained regarding the structure of the woodwork. Pits 6, 11, 13, 16, and 17 were selected for this purpose (fig. 3).

The bottoms of the pits were in every case below the loch level. Much difficulty was thereby experienced in emptying them of liquid mud, and in keeping them clear of water. By dint of continual baling, however, I was able to get sufficient material for diagrammatic drawings, of which figs. 9 and 10 are examples. These did not show any uniformity or definite plan in the arrangement of the logs in the different pits.

The logs in Pit 16 showed signs of checks and mortise-holes, and I spent a day in enlarging the pit (fig. 11). Below the usual 4 feet or so of earth, clay, and boulders, with pockets of sandy gravel, a layer of peaty material was met overlying a layer of logs. Immediately under the peat, and overlying the logs, was a quantity of charcoal and wood ashes. One of the logs showed distinct signs of having been scorched by fire.

On examining carefully between the logs, matted masses of reeds or straw, mixed with clay, were obtained. These had all the appearance of having been closely packed among the logs.

An interesting find just over the logs and resting on the clay was about a pint of hazel nuts.

Close by I pulled up a cylindrical ash peg or pile about 11 inches long, with a diameter of 2 inches. The lower end was neatly wedge-shaped. It bore clean-cut axe marks which had quite a fresh appearance (fig. 7).

When enlarging the pit, what looked like the base of a stone wall

was encountered 3 feet from the surface (fig. 11). It consisted of undressed stones of medium size embedded in a clayey matrix. Alongside this wall-base, and extending the length of the pit, was a carpet of stones which seemed to have been intended for a rough causeway (figs. 10 and 11).

The finds in the additional digging included, besides those enumerated, a piece of pottery in dry clayey soil below the surface earth, several bones from 2 feet 6 inches to 3 feet, and at 2 feet 6 inches an iron nail embedded in clay overlying a layer of peat.



Fig. 11. Pit 16: Woodwork.

The matted straw found jammed among the logs in this pit, and the peg with wedge-shaped end pulled up from among the logs, along with a piece of board (evidently a tie-piece) 10 inches by 2½ inches by 1¼ inch, having a roughly cut semicircular hole at each end (fig. 7), and a few rough wedges (fig. 7), found when groping underneath the logs in Pit 13, led me to clean out the debris from among the logs in the selected pits. I hoped thereby to get more definite knowledge of the manner in which the logs had been laid down, and at the same time to get photographs of the pit bottoms.

To cope with the water I procured a suction pump, which I rigged up by means of brackets to an old railway sleeper. For delivery hose, I used old bicycle tyre tubes connected by tin canisters. In actual practice the pump did not prove as serviceable as I had expected. The

muddy water frequently choked it, and the provision of a rose at the end of the suction tube proved only a partial remedy, as it required continual cleaning. The iron suction tube itself was a hindrance, as it could not be accommodated to the varying depths of the pits and to depressions in them. The rate of delivery, too, was little more than the rate at which the water percolated into the pits, so that the emptying of them proved a laborious task. A more powerful pump would be too heavy to be easily portable. A rotary pump, with a length of armoured hose as suction pipe, was tried at a later date and proved more serviceable, but even it delivered at too slow a rate. There was no remedy but to have recourse to baling with buckets and hawsers.

To crown all, winter had set in, and work had to be abandoned when but two photographs had been obtained. These were only got after a way to the island for the boat had been made through ice an inch thick, and the pits had been emptied of 2 feet of ice-covered water. The results, however, were sufficiently encouraging to cause me to resume work the following summer.

On returning to the island in July 1915, I determined to examine, in the same manner as in the case of Pit 16, the bottoms of the other pits of the woodwork of which diagrammatic sketches had been made. This necessitated, as preliminary work, the clearing out of the pits of a large amount of loose material which the rains and frosts had caused to fall from the sides and to accumulate in the pit bottoms. With the water it formed a liquid paste that proved very troublesome to remove. On the bottoms of the pits being thoroughly cleaned out, and the woodwork carefully exposed and photographed, it was found that the partly diagrammatic sketches made previously were more misleading than useful (*cf.* figs. 9 and 13). The sketch of Pit 11 at the western apex of the island showed the woodwork arranged in a radial manner as if to correspond with the curve of the perimeter of the island at that point; an actual photograph of the logs when cleared of debris showed no such arrangement. The peat overlying the logs in this pit was of a mossy texture. Associated with it were hazel-nut fragments and charcoal.

When the bottom of Pit 17 was cleared, it was found that the logs had been laid with care (fig. 12). The smaller logs seemed to rest on a larger beam, and stones and pieces of wood appeared to have been used as wedges to level the logs and give a horizontal surface. Pegs were observed seemingly keeping the pieces of timber in position. One of these appeared to pass through a check in one of the blocks. On removing a piece of timber about 4 feet long, it was found to be half of a tree stem, 6 inches in diameter, which had been split down the centre (figs. 15 XVI. and 23). Underneath it was a quantity of scorched barley

associated with cinders. A considerable amount of charcoal was found overlying the woodwork in this pit. Among the logs moss was got closely packed and peatifying.

The loch was now at its lowest level for the year. Pit 16, being situated at the most elevated portion of the island, was almost clear of water, thus rendering the exposure of the woodwork a comparatively



Fig. 12. Pit 17: Woodwork.

easy task (figs. 10 and 11). The presence of scorched logs was confirmed, and also the presence of charcoal and matted reeds and straw. The remains of the hoard of nuts found the previous year were got, resting on a mass of matted straw. On clearing away the foundation left *in situ* last season a good 6 inches of peat was found underneath, resting on the logs. The beams which are shown as checked in the diagrammatic sketch in fig. 10 were now found to be mortised, the holes being neatly and carefully made (figs. 11, and 14 XI(a), XI(b), XII(a), XII(b)). While the mortise holes had been utilised to hold a cross beam in

position, a careful examination showed the cross beam to fit badly and made it obvious that the holes had not been primarily made to serve their present use. This view was confirmed by a vertical side-check at the end of one of the mortised beams which served no manifest purpose. Advantage was taken of its presence to drive a neatly shaped peg into the underlying material with the upper end resting in the check. It was quite clear, however, that the check and the peg had not been made to fit each other. A block at the end of the same beam had every

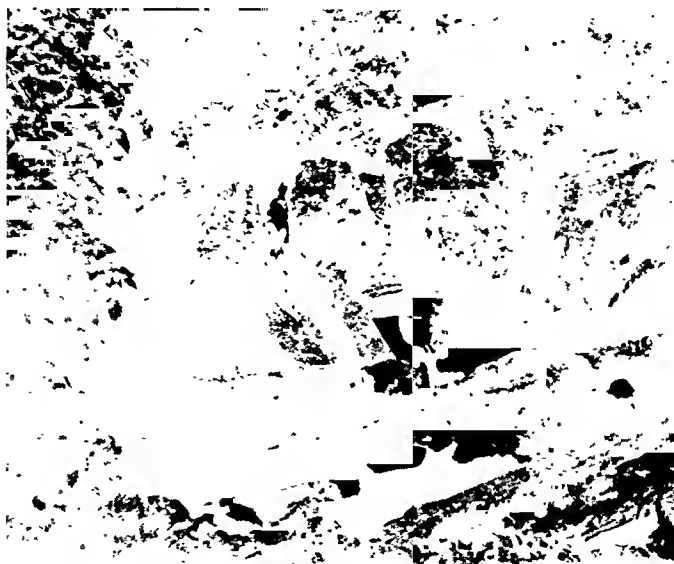


Fig. 13. Pit 6: Woodwork.

appearance of having been a waste block which was utilised to fill this empty space (fig. 11).

In Pit 6, three layers of logs were got (fig. 13). Over the logs at the west end of the pit was a layer of brushwood very much decayed. Charcoal, ashes, brushwood debris, bones with some of them split and others calcined, and fragments of hazel-nut shells were obtained among the logs. Traces of vivianite were seen. The decaying mass smelt like a peat bog.

Some of the logs had the appearance of having been levelled up with wooden and stone wedges. Under the upper logs was a quantity of bracken very much compressed and decayed. Brushwood was closely packed between the various layers of logs.

Immediately over the woodwork a roughly ovoid stone was got

weighing about four pounds. It was of mica schist, and had been subjected to strong heat.

On the bottom of Pit 13 being cleared up, three layers of logs were visible, evidently placed in alternate rows. The material among the logs yielded moss, charcoal, wood-chips, and organic debris.

On cutting away portions of the logs it was found that two of them had recessed holes in the under surface, $3\frac{1}{2}$ inches square and dome-shaped (fig. 16, and fig. 14 VIII(a), VIII(b), XIII(a), XIII(b)). In a side of one of the holes was a notch which was filled with an accurately fitting piece of wood. There was no evidence whatsoever of the holes having been utilised in the structure of the island. Another log had a peculiar forked end with a curved check at the back (fig. 16, and fig. 15 xv(a), xv(b), xv(c)). No primary use for this could be seen. These finds determined me to deepen the pit further, mainly to see whether more worked wood could be got, and particularly to see whether such wood had been so worked in connection with the purpose it served in the structure of the island.

The logs encountered were mainly oak. The outer coating was brown in colour, and quite soft, but the centre was exceedingly hard, and black as jet.

Four successive layers of logs were encountered to begin with. Below these, accurate observation was rendered difficult owing to the pit being too large to enable the water to be successfully coped with. The original lake bottom was reached at a depth of 8 feet, or 5 feet below the surface of the logs.

Below the logs three piles were got. One of these had the lower end pointed. It measured 6 feet in length, and may have been longer, as the upper end appeared to have been broken off. It was 6 inches in diameter (fig. 14 x.). A second pile which sloped at an angle of 45° had two peculiar recesses at the lower end inclining towards each other (fig. 17, and fig. 14 ix(a), ix(b)). There was nothing to show that these had been utilised in any way in the structure of the island. A third small pile 2 feet 4 inches long with a diameter of 3 inches, was pulled out of the drift material composing the lake floor (fig. 14 v.).

Three to four feet below the overlying earth was found a log which was partly burnt, and which could evidently have been used for nothing else but firewood. Near it were a number of pieces of charcoal.

Among the upper layers of logs were found moss, charcoal, wood-chips, heather, and other organic material, the whole forming a compact, peaty-looking substance.

The spaces between the layers of logs were jammed tight with decayed brushwood and vegetable mould.

LOCH KINELLAN: CRANNOG:
WORKED TIMBER:

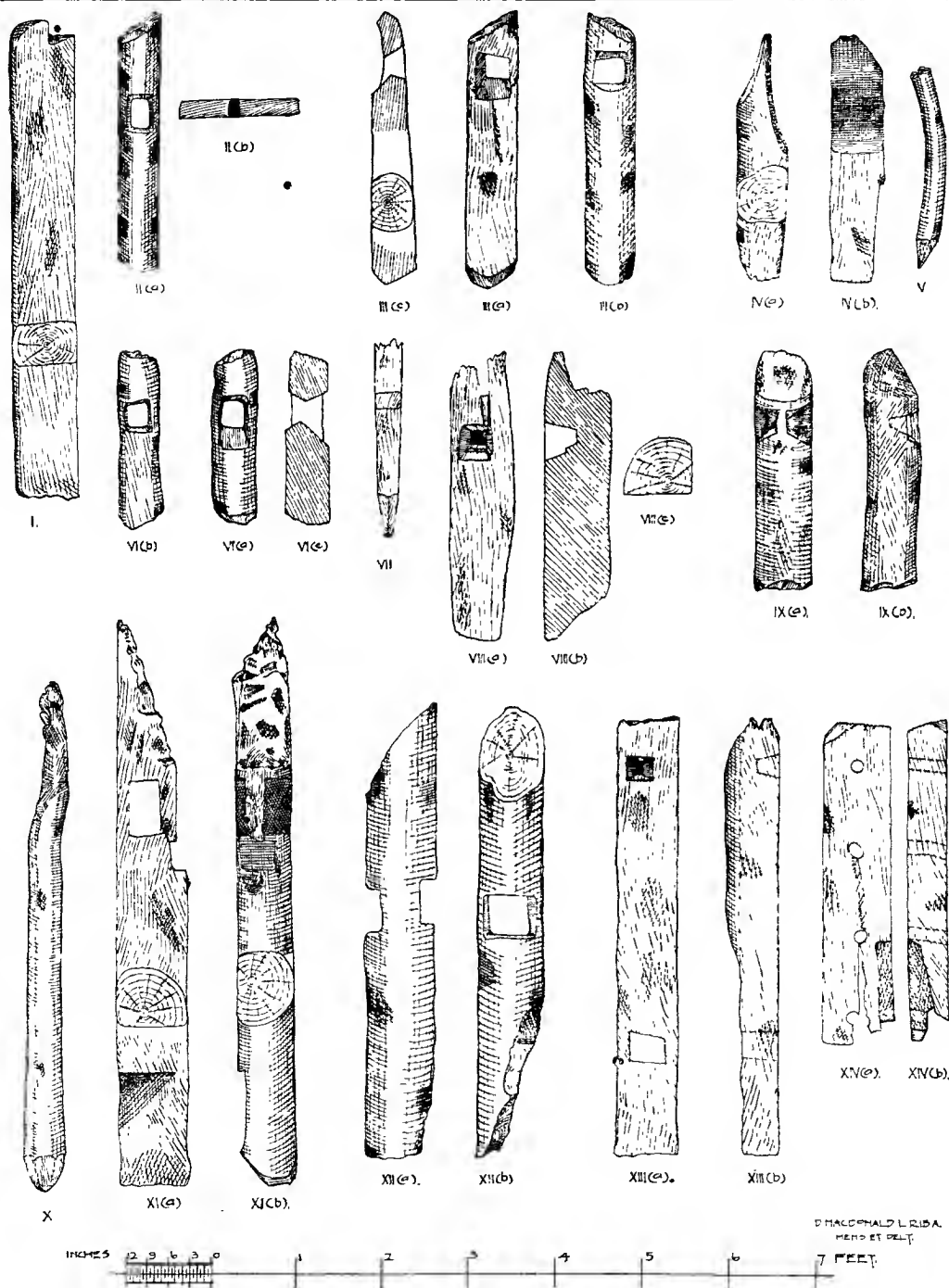


Fig. 14.

:LOCH KINELLAN:CRANNOG:
:WORKED TIMBER:

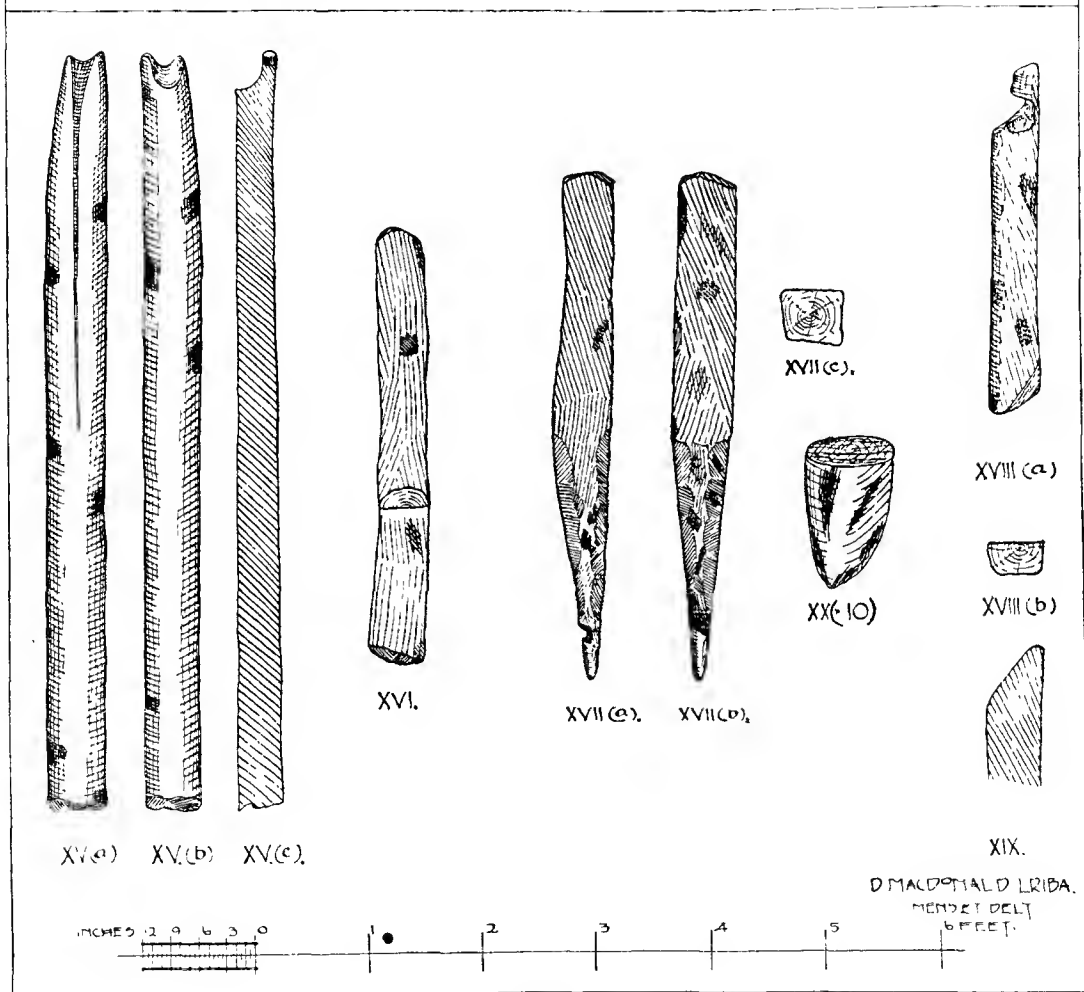


Fig. 15.

Under the logs were masses of brushwood debris, much decayed, and containing nuts and leaves. These latter were quite green in appearance, but quickly darkened and shrivelled up on being exposed to the atmosphere.

Peaty material, yellow in colour, was found to contain compressed wood, leaves, and twigs.

Below the brushwood, right down to the lake bottom, there was continuous organic material. There were found mould with charcoal, wood-chips, and bracken stems; brushwood debris with compressed wood,

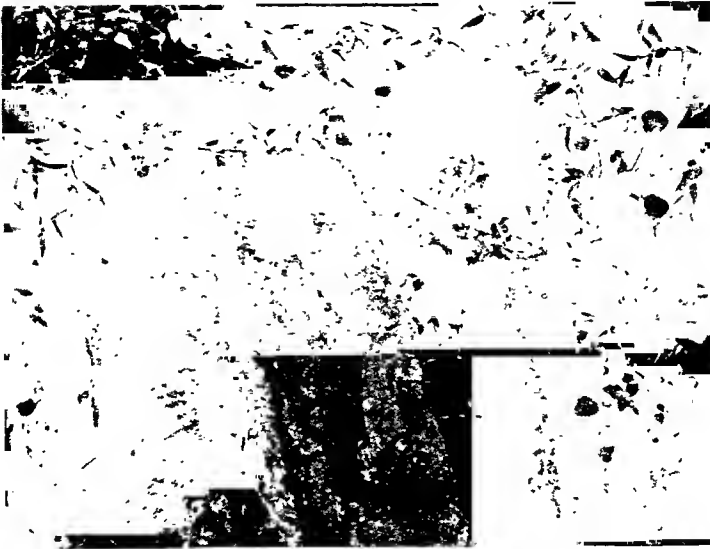


Fig. 16. Pit 13: Worked Timber.

pieces of bark—for the most part birch and hazel—and charcoal; earthy-looking seams containing charcoal and calcined bones, wood-chips and pieces of bark, reed stems and root fibres; and a seam with clay, moss still green, reeds, charcoal, fragments of hazel-nut shells, and bracken stems. Quite near the bottom were got charcoal, wood debris including chips, bracken stems, and broken shells of hazel nuts.

Clear water kept welling into the bottom of the pit. It appeared to flow from between the base of the island and the original floor of the lake.

The compact drift material at the base was dug into for some distance to make sure that it was not part of the structure of the island.

I was now convinced of what I had suspected for some time, that

the part of the island structure underlying the woodwork was at least as interesting as the overlying mass. I was particularly anxious to ascertain whether the organic material was stratified.

I accordingly decided to dig a further pit and to pay particular attention to the various layers. I selected a spot near Pits 10 and 19 which when being dug proved particularly rich in organic material, and made the pit of small area, 5 feet by 4 feet, in order the more easily to cope with percolating water (figs. 3 and 18).

On digging through a layer of about 2 feet in thickness of black earth and boulders (section, fig. 19), containing a number of lumps of baked clay, pieces of calcined bone, and two pieces of iron—evidently nails—covered with a thick incrustation of rust and ashes, there was encountered a bed of clayey material with a pocket of sand. On examination it was found to contain charcoal and patches of a sooty substance, with streaks of ashy material running through it.

Below the clayey seam was a mass of brushwood much decayed, the under portion being very peaty. It contained axe-chips and pieces of bark and bone.

Immediately following was a seam of compact organic material consisting of matted straw or grass and reeds, with bracken and heather. It was impregnated with charcoal, wood-chips, pieces of bark, hazel nuts entire and in fragments, bones—some whole, some split, some calcined,—and fragments of pottery. Some small pieces of the seam had a great similarity to heather divots. The layer bore such unmistakable evidence of being accumulated debris of human occupation that it was at once described as flooring. As similar layers were found subsequently, in this and in other pits, far below the water-level, the term "habitation stratum" was substituted for flooring.

In all, to the level of the first habitation stratum, eighteen pieces of pottery and twenty-eight bones were obtained. Of the pottery, three fragments were got in the black earth, eight pieces between the black earth and the first habitation stratum, and eight in the stratum; while of the bones, two were got in the black earth, fourteen between the black earth and the first habitation stratum, and twelve in the stratum.



Fig. 17. Worked Log used as pile.

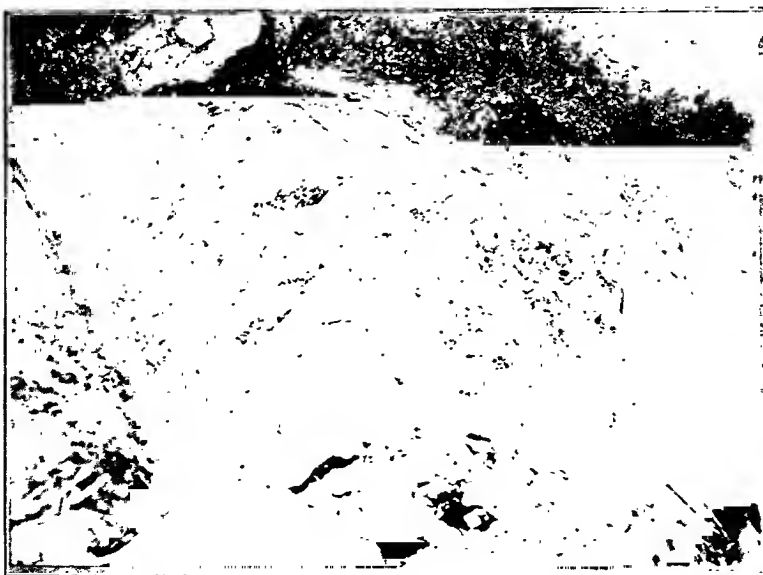


Fig. 18. Pit 19 (a): Surface view, and view showing Pit dug to original floor of Lake.

With the exception of two bones of the red deer, all the bones got were bovine.

On the habitation layer being cleared away, a large beam was exposed crossing the pit obliquely at one corner.

Underneath the first habitation stratum was a layer of clay similar to the one noted above, but thinner. Following was a seam of peat 4 inches in thickness, and below it was a layer of heterogeneous organic material composed largely of brushwood. It was termed "occupation debris." A second habitation stratum was then encountered very much thicker than the first, but practically identical with it in composition. Embedded in it was a quantity of small black pupa cases, probably of the water beetle.

Twenty bones were obtained, all bovine with the exception of one pig bone and one red-deer bone. Nuts, whole and in fragments, wood-chips, and pieces of charcoal were found in profusion, but neither the occupation stratum nor the overlying peat and brushwood yielded any pottery fragments.

Level with the top of the occupation stratum a piece of roughly dressed oak was discovered which proved to be a pivot door, 12 inches long by 6 inches wide and $\frac{1}{2}$ an inch thick. One pivot was wanting; the other was grooved by friction on the under surface and projected $\frac{3}{4}$ of an inch from the side. Adhering to the door was a conglomerate mass of brushwood debris, axe-chips, pieces of bark, nuts, bones, and charcoal. This mass was part of the overlying occupation debris.

The second habitation stratum also was succeeded by a band of clay, about 2 inches thick. Following it were brushwood, occupation debris, and at least one habitation stratum, the whole forming a section 18 inches thick. These layers showed the same general characteristics as those noted above. They were, however, much more difficult to differentiate, the difficulty being increased by incoming water.

Even at the base of this section large axe-chips were obtained. Material got from below the bottom of the section—that is, from a greater depth than 6 feet—yielded a peaty substance, composed seemingly of heather, with hazel roots, water reeds, and a thin layer of sand. It yielded further a decayed organic matrix containing bones and masses of wood-chips and charcoal.

Eighteen bones were got in the foot and a half represented by the section. One bone was of some bird species, the others were ox bones. Hazel nuts and hazel-nut shells were found throughout.

Six well-shaped pegs were found, the largest of them at the base of the section. Three were of oak, rectangular and measuring 6 inches, $5\frac{1}{2}$ inches, and 3 inches in length respectively. Two were of hazel. One

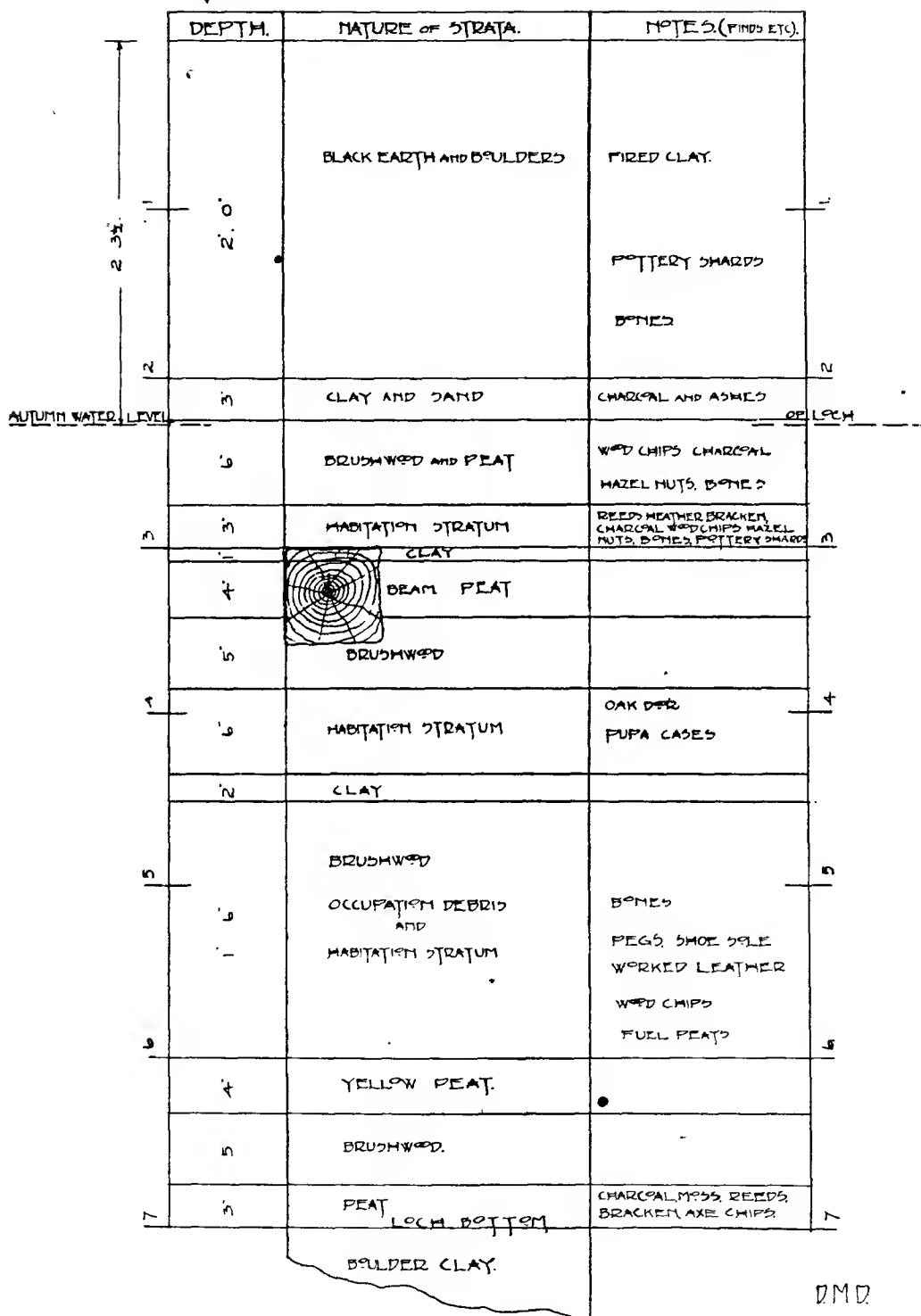


Fig. 19. Pit 19 (a): Section.

of these was 4 inches long, and conical in shape, with a rounded top; the other was but the end portion of what was originally a larger peg. It was a flattened ellipse in section, and seemed to have been fire-hardened. The head end of the sixth and largest peg appeared to have been driven by a mallet; the pointed end was broken off.

In the habitation stratum was found a cylindrical oak stopper $1\frac{1}{2}$ inch long and $\frac{9}{16}$ inch in diameter (fig. 15 xx.).

In the same stratum was got part of the inside sole of a boot or shoe. It was of tanned leather, and was stitched with "half-seam" stitching. When traced out, the sole proved to be $10\frac{1}{2}$ inches long and $3\frac{1}{2}$ inches in greatest width. Several pieces of leather looked like welting; the stitching, however, was not like that of present-day welting. A piece of half-dressed leather appeared to be part of the upper portion of a shoe. If so, it would point to a sandal-shaped brogue. The edges showed "half-seam" and "split-and-lift" stitching. A "dog's ear" on one edge had a button hole at the end. On an adjoining edge was a leather button formed from a single thong, which passed through a punched hole in the leather and was retained on the other side by two pieces of twisted thong. The dressed surface of the buttonhole had a friction-worn depression in which the thong button fitted.

At the base of the section were a number of sun-dried cast peats. These must have been somewhat smaller than the peats cast for fuel at the present day, being from 2 inches to 3 inches wide and from 1 inch to 2 inches thick.

Immediately below the foregoing strata was a layer of yellow peat 4 inches thick. On exposure to the air it became indistinguishable from the overlying material. Underneath it was a layer of brushwood 5 inches thick, overlying a peaty seam of 3 inches. Then came the lake bottom, 4 feet 9 inches below the present-day autumn level of the lake, and 7 feet below the surface of the island.

As indicated already, the peat and brushwood layers at the bottom of the pit differed little in character from the corresponding layers higher up, with the exception of the layer at the extreme base. This was a peaty-looking material consisting of fine mud with an organic matrix, and containing the roots of large water-plants. It was quite evidently the mud of the original lake bottom; the line of demarcation between it and the overlying strata was quite clear. The peat immediately overlying it contained wood-chips, charcoal, moss, reeds, and bracken, while the debris within a few inches of the bottom contained two peg-like chips showing clean axe-cuts.

The glacial drift at the base of the pit was dug into for about 6 inches.

Water trickled into the pit from between the base of the island and the overlying clay. Unlike the muddy water that oozed into the pit at higher levels, this water was clear except for a slightly yellow tinge. It smelt strongly of sulphuretted hydrogen. After twelve months it was still clear, retained its yellowish tinge, had deposited very little sediment, and continued to smell of the gas.

The location of three finds was uncertain. One of them was an oak peg 9 inches long, rectangular in section, with a chisel-shaped end. The second was a small piece of soft wood, semicircular in section, with a checked and tenoned end. The curved surface was finely finished; the flat surface was the result of a fracture. The original section was evidently elliptical. Both of these probably came from the third habitation stratum shown in fig. 19. An iron hunting spear-head was unfortunately overlooked in the course of the digging. It has a pointed prong end, $3\frac{1}{2}$ inches long, with a square section of $\frac{1}{2}$ -inch side, and a socket end $2\frac{1}{4}$ inches long, also pointed and square in section, the breadth of the side at the base being two-fifths of an inch. It had a thick covering of rust and vivianite.

It was now evident that a more or less definite stratification of the organic mass underlying the surface earth and boulders could be distinguished. I was not satisfied, however, that we succeeded in distinguishing all the strata. The material between the clay at 4 feet 6 inches and the yellow peat at 6 feet, in particular, was difficult to differentiate. A sample of earthy peat got underneath the habitation stratum at 4 feet has no place assigned to it in the section.

Some of the seams were so thin that it was an exceedingly difficult task for a man working in so confined a space to dig them out separately. Small as the pit was, too, water interfered greatly with both the digging and the observation, below the level of the water in the lake. The obvious method of getting a section by clean-cutting one of the sides of the pit was tried, but proved unsatisfactory. The material was so soft that the pressure of the spade in cutting through it flattened and plastered the exposed section, and obliterated the boundaries of the strata. The whole material, too, soon turned to a uniform jet-black colour, which still further increased the difficulty of identifying the seams. It was only by exercising some care that the tape could be employed to check the measurements already got in course of the digging.

With the experience now gained in identifying strata, I thought another pit dug with care might possibly yield a finer differentiation. I selected a spot near Pit 18 (fig. 3) which, in last year's digging, yielded a wealth of wood debris.

Again the pit was kept within the narrowest possible limits. Even so,

half only of the pit could be continued below lake-water level if baling were to be possible.

About 15 inches of black earth were followed by a thick layer of whitish ashes containing pieces of a black, sooty-looking substance. Lumps of baked clay were got, particularly in the base of the black earth and associated with the ashes (fig. 20).

Below the ashes was a thin layer of peat with heather entering largely into its composition. It was followed by a habitation stratum similar to those described in connection with Pit 19a—compressed bracken and grasses, with charcoal and wood-chips, bones, and hazel nuts.

In all, up to a depth of 6 feet there were distinguished five different habitation strata in addition to the layer of ashes and burnt clay at the top. They were got at 2 feet, 3 feet, 3 feet 7 inches, 4 feet 6 inches, and 6 feet.

The habitation stratum at 3 feet contained a quantity of charcoal and ashes, with earthy material and decayed organic matter. The stratum at 3 feet 7 inches consisted of compact peaty-looking stuff containing fragments of bones and charcoal, and showing traces of vivianite. From the fourth stratum at 4 feet 6 inches were obtained lumps of charcoal and ashes with organic debris. The stratum itself consisted of matted material, very much compressed, containing wood-chips in quantity, charcoal, nuts, and bones. The peat from the fifth occupation stratum was of heather and moss, with mud interbedded in thin layers. The "occupation" portion of it showed traces of straw and reeds, with the usual fire and food refuse. At the base of the stratum were found a number of fragments of oyster shells.

The clay underlying the second occupation stratum contained a large number of stones. It showed no signs of puddling, nor did it contain any charcoal or ashes.

Underlying the fourth occupation stratum was an inch of very earthy peat interbanded with silted mud. Beneath it was a layer of what *in situ* appeared to be fine sand, but on examination was found to be gritty material mixed with ashes, charcoal, and calcined bones.

Succeeding the fifth occupation stratum was a mass of brushwood debris and peat, which it was found impossible to differentiate into distinct layers. A sample from a depth of 7 feet 6 inches proved to be peat formed from heather and moss, containing the familiar assortment of axe-chips, charcoal, and bones. Material from a depth of 7 feet 9 inches contained bracken fronds, charcoal, and sand grains. A large wood-chip got at this depth showed clean axe-cuts, while a rib bone had three cross cuts made with a cleaver or similar sharp instrument. Water now gushed into the pit in such volume as to stop further digging.

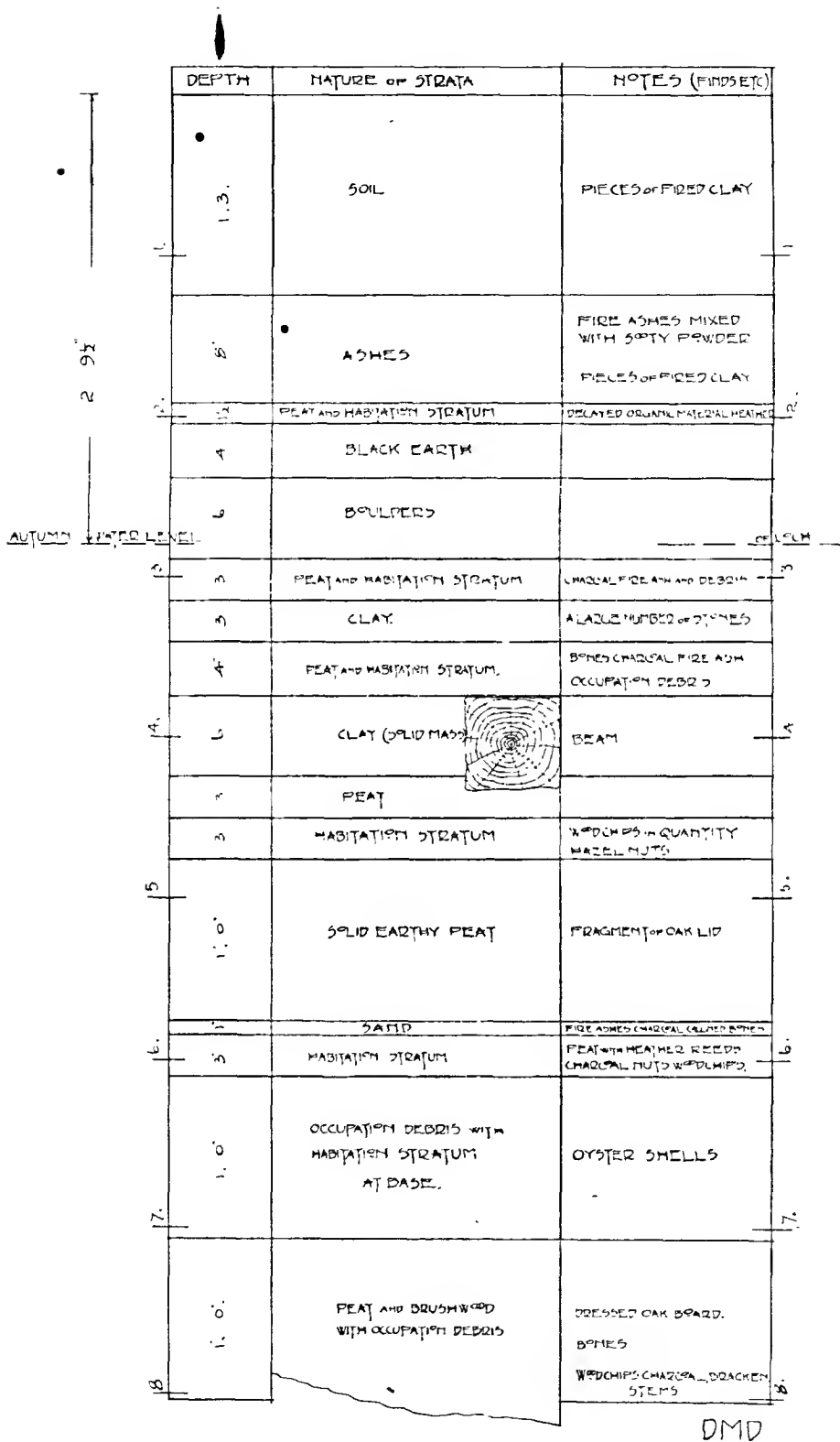


Fig. 20. Pit 18 (a): Section.

Two fragments only of pottery were obtained, both from a depth of 4 feet.

Twenty-seven bones were got. The distribution of these was—five in the first occupation stratum, two in the second, thirteen in the third, two in the fourth, two in the fifth, and three at the base of the pit (7 feet 9 inches). They were again all ox bones with the exception of one bone of a bird species in the first occupation stratum, a sheep bone in the third, and a red-deer bone at the base.

A beam got at a depth of 4 feet proved to be a well-dressed rectangular piece of oak, measuring 3 feet 8 inches by $9\frac{1}{2}$ inches by $5\frac{1}{2}$ inches (fig. 14 XIV(a), XIV(b), and fig. 23). One end was semicircular, while the other was half-checked and bevelled. Through the logs were three holes elliptical in section, with the major axis vertical in each case. On the lower side at one end they showed signs of wear by friction.

In the earthy peat underlying the fourth occupation stratum was found what was evidently part of a circular oak lid $6\frac{1}{2}$ inches in diameter, with a circular hole $1\frac{1}{2}$ inch in diameter in the centre. The circular edge was slightly bevelled, while the back showed clearly that it was a split-off fragment.

A small piece of oak board got near the base of the pit was $\frac{1}{4}$ inch in thickness, had a well-made edge, and showed rough dressing on both faces.

A feature in the case of this pit was the marked amount of vivianite observed after the organic material had been exposed to the sunlight for some time.

It was also noticed that peaty material which dried rapidly in the sun formed solid masses hard as stone, whereas portions of the same peat which had been wrapped up and preserved for laboratory examination fell to powder on being handled, much of the finer organic matrix having crumbled away as the result of bacterial action.

It will be seen by referring to figs. 15 and 16 that the surmise, that a new pit dug with the accumulated experience already gained would yield a more numerous and varied assortment of layers, turned out to be correct. If allowance be made for the greater differentiation in the case of Pit 18a, a comparison of the two sections shows a marked resemblance in their broad sequence, though the resemblance is by no means marked when the sections are examined in detail. While it would be unwise to generalise from sections of such limited area, the probability is strong that the various layers do not extend over any great extent of area. Even in the same pit, a layer at one side was often very difficult to trace at the opposite side. This was particularly true of the layers of sand and mud, which were more of the nature of pockets than of strata.

Broadly, however, Pit 18a in conjunction with Pit 19a, and both in

comparison with the neighbouring pits, showed that—under a surface mass of earth and stones corresponding to that found above the peat overlying the logs in the wooded pits at the west end of the island—there is a succession of layers of organic material in which habitation strata and occupation debris can be distinguished down to a depth corresponding with the lowest layer of logs in the wooded pits. Below that level there seemed to be, both in the wooded pits at the west end of the island and in the non-wooded pits at the east end, a heterogeneous mass of brushwood, occupation debris, and habitation strata right down to the lake bottom.

It is worthy of note, too, that in the pits at both ends of the island there were signs, in the upper strata of earth and stones, of successive eras or periods of occupation, and that in both Pit 18*a* and Pit 19*a* an isolated log was got at approximately the level of the beams in the western half of the island.

The centre of interest having now definitely passed from the upper to the lower strata, I decided to excavate still another pit to test the conclusions arrived at. To save labour in digging I decided to deepen one of the existing pits, and selected Pit 4 as being centrally situated between the west and east ends of the island (fig. 3). I enlarged the pit by a foot on three sides, thus giving a fresh exposure of the upper strata and affording a platform to receive the material from the deepened portion. This latter I restricted considerably in area, so that the workman was confined by a high bank on one side only.

Previous to starting the actual digging, I employed the workman for some odd time in cleaning out Pit 8 (fig. 3). On removing the loose material which had fallen from the sides in the course of the winter, there was met with the layer of brushwood which was encountered in the former year. When it was removed, a layer of peat was exposed overlying a habitation stratum containing the usual axe-chips, charcoal, and food refuse. As the pit gave every evidence of being a virtual repetition of Pits 18*a* and 19*a*, digging was discontinued.

On proceeding with the enlargement of Pit 4 (fig. 21) there was found, underneath 18 inches of black earth, a thin seam of charcoal overlying about an inch and a half of puddled clay. This consisted of very fine blue clay in lumps and laminæ, which were covered with a thin coating of a brownish, rusty-looking substance.

The puddled clay was followed by about 2 feet of clayey material with a large number of stones. The base of it in particular contained large boulders.

Underneath the boulders was encountered the baked-clay seam referred to in connection with Pits 2, 3, and 5 (see p. 58). A sample in

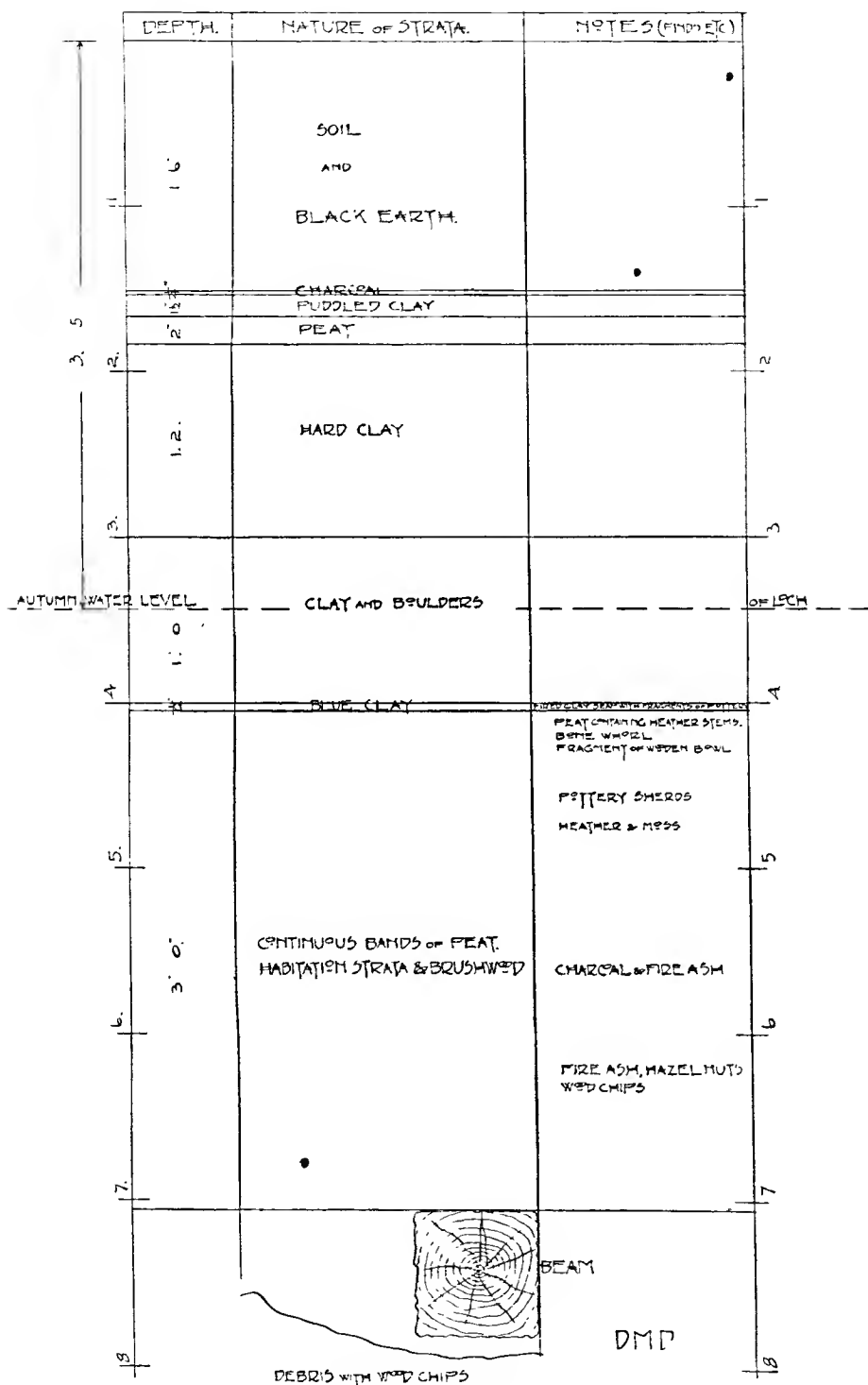


Fig. 21. Pit 4: Section.

which is seen the junction of the baked-clay seam with the underlying peat shows earthy material interspersed with pieces of fired clay, some of them minute, others a quarter of an inch or more in diameter. This earthy stuff contains traces of sooty-looking ashes, and overlies hard peat which also contains fired-clay fragments. Other portions of the seam consist of earthy sand intermixed with fired clay containing small fragments of pottery. Still further portions are of bluish clay containing pieces of shale, stones, and traces of soot. Small lumps of baked clay are to be seen in them, and they also contain traces of vivianite.

From this depth downwards there were continuous layers of peat, brushwood debris, and good solid habitation strata, all more or less running into each other, and frequently yielding wood-chips, bones, and compressed heather.

At 7 feet a squared oak beam barred further progress, as it could not be removed owing to the small area of the pit.

Over the beam was a thick, matted, occupation stratum containing wood debris, bones, charcoal, chips, pieces of bark, and nuts. It underlay a layer of debris containing wood-chips, bracken fronds, and brushwood refuse. A small pocket of deposited mud in the stratum contained a number of fragments of hazel nuts.

Underneath this habitation stratum was a mass of brushwood debris and chips, similar to that found at the base of Pit 18a.

A portion of peaty material from a depth of 4 feet 3 inches, composed mainly of moss and heather, and cut in turf form, was, on drying, indistinguishable from an ordinary fuel peat.

Material from a depth of 4 feet 6 inches, consisting chiefly of heather and moss with earthy peat, might, from appearance, have been thin divots.

From a depth of 5 feet 6 inches was got a quantity of charcoal overlying peaty stuff, with fine mud underneath. Associated with the charcoal were whitish ashes, probably peat ashes, and sooty-looking material. At 6 feet was found, in quantity, what appeared to be hearth stuff, with a large amount of ashes and charcoal. With it was associated a mass of wood-chips and hazel-nut fragments.

A number of shards of rough pottery were obtained at a depth of from 4 feet to 5 feet.

Of twenty-four bones in the organic debris from 4 feet to 7 feet, thirteen were ox bones, nine pig bones, and two sheep bones.

The general result of the digging of this pit was to confirm the conclusions arrived at from the digging of Pits 18a and 19a.

The east end of Pit 6 in the centre of the island next received attention (fig. 13). The logs appeared to rest on, and to slope down from, a

ridge beam. On the short logs on one side being cleared away, there was seen on their under surface a distinct notch, the result of pressure or friction on the part that had been resting on the "ridge." One of them had an elaborate mortise hole, one edge of which was bevelled from both sides (fig. 14 VI(a), VI(b), VI(c)). It served no purpose that could be ascertained.

On removing the rest of the beams resting on the "ridge," I was struck by the peculiar shape of the latter. I accordingly cleared away



Fig. 22. Pit 6, showing second layer of Logs, with Gunwale of Canoe resting against small piles.

all the logs from its vicinity, and found that the "ridge" was a gunwale of a dug-out canoe (fig. 22).

As, from a purely archaeological point of view, this was perhaps the most interesting find on the island, I resolved to recover it if possible. The task proved a formidable one. With the additional digging the water became all but unmanageable, and with fine material from the pit sides and bottom formed a liquid mud that was most unpleasant to work in, and almost impossible to get rid of. After several Saturdays' work the length of the canoe exposed was increased from 9 feet to 20 feet. At this stage winter storms compelled the cessation of work for the season. Even before the rise in level of the loch water, the emptying of the pit took two men nearly two hours!

When in the summer of 1916 a further attempt was made to unearth the canoe, the dearth of labour consequent on the war threatened to



Fig. 23. Worked Timber.

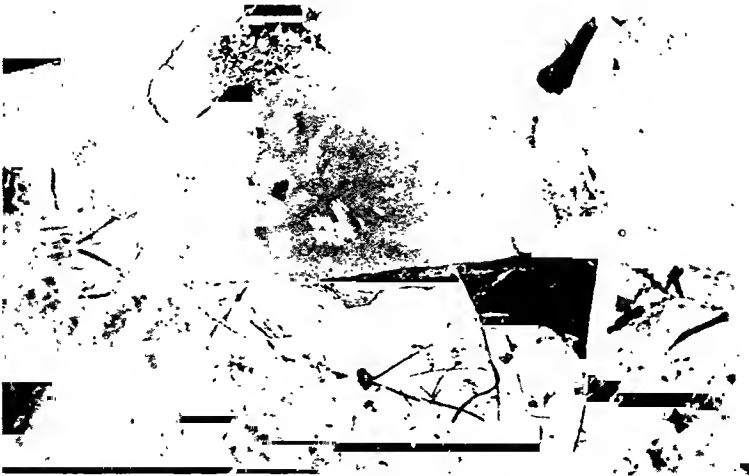


Fig. 24. North end of Canoe Trench showing a pointed post or pile in position as a horizontal log, and another post or pile *in situ* with sharpened end upwards.

present an insuperable obstacle. A number of navy men became interested in the find, however, and with their assistance it was at length raised. It proved to be 24 feet 9 inches in length, with a beam of probably 30 inches. It seemed to have been considerably damaged before

having been used as a log in the platform structure. Placed and propped up, as it was, on one edge, it appeared to have been warped to some extent in course of the long time it must have occupied its position in the island structure.

Three layers of logs overlay the canoe, the uppermost of which seemed to form a floor, while the lowest consisted of short logs that appeared to act as props. A number of the logs were worked timber, the employment of which again seemed to be entirely fortuitous (fig. 23). A number of odd pieces of wood, utilised to fill up gaps, may well have been waste blocks from a woodyard. A well-pointed pile, evidently formed from a piece of second-hand wood—witness the notch near the end—served the purpose of a horizontal log (fig. 23, and fig. 15 XVII(a), XVII(b)). A similar pile or post is seen *in situ* lying horizontally, in a photograph of the northern end of the canoe trench (fig. 24). In the same photograph a further pile is seen in a vertical position, with the pointed end up.

While enlarging the canoe trench at the north end, a thick layer of fire ash was got about 15 inches from the surface. Above the logs was a deep seam of well-formed peat, with two inches of charcoal underlying it immediately over the beams.

The debris among the logs included wood-chips in quantity, moss in masses, and leaves, fresh and green, but soon turning to yellow on being exposed to the air. In the vicinity of the canoe were brushwood, axe debris, reeds, and hazel nuts. Near the lower edge was a quantity of stones.

Beside the canoe were found a large number of bones.

The only flint implement found on the island was got while the canoe was being dug out—a very fine flint flake. It was discovered among some debris immediately overlying the canoe.

RESULTS OF THE INVESTIGATION.

The results of the investigation of the island may be summed up under two heads—structure and age.

Structurally the island appears to consist of three main series of layers:—

1. The upper structure of earth, clay, and boulders, with local seams of peat, charcoal, and burnt clay.
2. The strata represented in the west half of the island by the platforms of timber with the intervening occupation debris, and in the east half by the stratified layers of brushwood, clay, peat, and habitation refuse.
3. The mass of organic material at the base of the island.

The uppermost series can be accounted for as having been superimposed on the wood platforms or the stratified layers corresponding to them. The wood platforms, with associated and corresponding strata, can be accounted for by supposing them to have been laid down on what is now the organic mass at the base. The difficulty is how to account for that mass. It cannot have fallen through the existing wood platforms, for these show no evidence of having been rafted, while the spaces between the logs do show evidence of having been tightly packed with material.

The mass at the base may be accounted for if we suppose super-water structures to have existed on the site of the island to begin with, and the wood platforms and corresponding layers to have been laid down when the detritus from these structures reached water-level.

Such over-water structures might account for the worked timber which was found in abundance among the logs, the use of which appeared to be entirely fortuitous, and which everything pointed to as having been previously employed structurally (figs. 14, 15, 23, 24, and Appendix III.). If so, the structure of which they formed part must have been on the site of the island, or in the vicinity. It would not have been worth while to carry the wood any distance. Tree stems from close at hand would have served the same purpose equally well.

A further point bearing on the structure of the island is that along the perimeter there appears to be a palisade of beautifully pointed stakes, some 2 feet 6 inches long, which slope outwards. Such stakes were found by one of the workmen when cleaning out Pit 14, near the southern edge of the island (fig. 14 VII.). Their general appearance and situation would seem to confirm the conclusion arrived at by Mr Corbett of Kinellan when digging a trial pit on the island in 1911. He writes: "Piercing the sand vertically, and also at an angle of 30°, we found long and sharp-pointed stakes driven in groups evidently with the intention of 'containing' an earlier island than that now existing, and this probably was the basis of the present island."¹ If for "an earlier island" there be substituted "accumulated habitation refuse," Mr Corbett's conclusion is the same as that arrived at from the present much more elaborate and prolonged investigation.

Any consideration of the structure of the island must take into account the loch level.

The autumn level of the loch at the present day is 18 inches lower than the winter level. The great difference that makes to the area of the loch and to the appearance of the island can be seen on reference to figs. 25 and 26.

¹ *Proceedings of the Society of Antiquaries of Scotland*, vol. xlvii. p. 274.

The outlet of the lake is a channel, 50 yards long by 4 to 5 feet wide and 7 feet deep, through strata of soft crumpled shale. It has every



Fig. 25. Kinellan Island from north-east in summer.



Fig. 26. Kinellan Island from north-east in winter.

appearance of being at least partly artificial. It is known to have been lowered in recent years to increase the summer grazings round the loch.

It was in all probability lowered previously, as the water of the lake has for long provided the motive power for mills.

Whether the outlet was artificially lowered by the makers of the island cannot, perhaps, be ascertained now. There is nothing inherently impossible in the idea. Workmen who possessed the tools which, from direct evidence, must have been possessed by the earliest occupants of the island site would have no difficulty in lowering the loch outlet through soft shale. There is strong presumptive evidence that they did so. A terrace to the south of the present shore marks probably the glacial level of the lake. The amount of erosion which the comparatively small out-flow from Loch Kinellan, practically unassisted by gravity, could make in post-glacial times in flowing over beds of shale, which, if rotten, are at one part of the channel in particular almost vertical, would leave the level of the loch higher by several feet than the present level. A rise of two feet in the level of the loch would submerge all but the western portion of the island, as it stands. That the level of the island now is substantially what it was when occupied is seen from the stone barrier surrounding it. At the east end, the lowest part of the island, the barrier is at, approximately, the level of the island surface. The barrier is not likely to have sunk, for, where there is a clear exposure, it is seen to rest on the floor of the lake, which in course of the excavations was found to consist of compact drift material overlaid by but a few inches of black mud.

While the general level of the surface of the island is now probably what it always was, there must have been a long period, during which the organic material of the island was settling down, when the surface had to be heightened to compensate for subsidence. Two-thirds of the structure of the island consist of organic material which, in course of time, became much carbonised, and in consequence compressed. Brush-wood being largely employed in the structure, would in itself lead to compression.

In the canoe pit we found means of applying a rough test to the amount of sinking that has taken place, in the fact that the logs with one end resting on the canoe sloped downwards towards the other end, showing that the unsupported end sank at a faster rate than the long canoe. While the canoe itself undoubtedly sank with the island as a whole, that such sinking was not great was shown by the south end of the canoe. This rested on a pile and was thereby dented upwards, but to the extent of a few inches only.

The material available here for accurate measurement made the temptation strong to ascertain the amount of sinking with mathematical precision. The various elements entering into the sinking of the island

are, however, too complex to enable any such attempt to do otherwise than defeat its own ends. Still, the evidence would amply justify the conclusion that the sinking since the superposition of the material overlying the canoe did not amount to more than 18 inches to 2 feet at the outside, that being the extent to which the unsupported ends of the logs had sunk below the ends resting on the canoe. Indeed, the cumulative evidence of the investigation would indicate that it is very easy to exaggerate the amount of sinking that islands such as this have undergone.

It need not be pointed out that the foregoing remarks on the sinking of the island only emphasise the conclusions already arrived at, from the direct evidence of the digging, as to the source of the basal strata of the crannog. The debris of human occupation at the base of the island either must have been deposited in the water of the lake, or it must have accumulated on a structure that was able to support human occupancy above water-level. The only feasible material for such a structure is brushwood, and the supposition means that a mass of brushwood at least 7 feet deep (allowing the then level of the lake to have been 2 feet higher than the present level), and sufficiently compact to support human habitations, has been compressed into the few inches of detritus at the base of the island that underlie the lowest evidence of human occupancy. That could only be possible if the brushwood were entirely pulverised, whereas such brushwood as there is at the base of the island shows branch stems that exhibit no signs of having been crushed.

Little direct evidence of the age of the crannog was obtained in course of the investigation. That wood-chips, cut with a sharp iron instrument, exist at the base of the island, is helpful only in a general way.

The bones included portions of the skull of a shorthorn ox, which Professor T. H. Bryce considers may be the Celtic shorthorn, *Bos longifrons*. Bones of a small type of horse were got, and of a small breed of sheep. The bones included also larger types of oxen and sheep, and a domestic breed of pig (Appendix I.). By far the largest number of bones were ox bones. Pig bones made a bad second, with sheep bones nearly as numerous. Red-deer bones were comparatively few in number. All the foregoing bones were represented in the large number found near the canoe.

As regards the animals used for food, therefore, there does not appear to be much difference between Kinellan crannog and similar islands that have been investigated in the south of Scotland.

From the fragments of pottery obtained, Mr Curle, Director of the Royal Scottish Museum, has, as already indicated, drawn a restoration of the general type of vessel in use (fig. 8 and Appendix II.). It would point to pottery of the fourteenth and fifteenth centuries. It is note-

worthy, however, that the pottery was confined entirely to the uppermost strata. None was found below the level of the first wood platform, or the corresponding level at the east end of the island.

The piece of carved ivory (fig. 6) found in Pit 4 (see p. 58) may yet afford a clue to the age of the stratum of the crannog in which it was discovered—just underneath the upper strata of earth, clay, and boulders.

The evidence of the canoe is less helpful in fixing the age of the crannog than would appear. It was certainly used in the structure as a log. That is no reason to conclude that canoes had then ceased to be used on the loch, for the canoe found was very much damaged, and may have been discarded on that account. On the other hand, the presence of a dug-out in such a position is not necessarily evidence of any great antiquity.

The historical evidence of the occupation of the island has already been given.

The facts that the organic material forming all but the uppermost layers of the island would seem to have consolidated before the canoe was placed in position, that the bones found near the canoe represent earlier and later types, and that pottery fragments appear to be confined to the surface layers above the level of the canoe, point to an interval of time between the period of occupancy represented by the surface structure and the occupancy or occupancies represented by the lower layers. From the evidence of the pottery, the surface strata may well represent the occupancy of the island by the Earls of Ross and the Mackenzies.

The large amount of leaves, bracken, and hazel nuts found in the various strata containing occupation debris would seem to indicate that the island was occupied mainly in the autumn—the hunting season. Against that view must be placed the facts that the amount of charcoal found in these strata appears greater than would result from autumn occupation only, when fires would be used almost solely for cooking; and that the food refuse contains but little evidence of animals of the chase.

The prominent features of the crannog are its great size; the large amount of organic material forming the main structure of the island, and the large amount of soil, earth, and stones overlying it; the stratification of the upper portion of the organic material and the seemingly heterogeneous nature of the lower portion; the patches and seams of burnt clay in the surface layers overlying the logs; the large amount of peat of ascertainable texture underlying the surface layers and overlying the logs; the presence of charcoal, often in large layers, at all depths down to the lake floor; the abundance of wood-chips; the profusion of bones; and the large number of pottery shards. Special mention may be made

of the extensive and seemingly fortuitous use of worked timber, and the comparative dearth of relics of a spectacular kind.

The account of the excavations with the various finds (see pp. 53-89) embodies not only careful notes and measurements made at the time, but also the results of laboratory examination of samples and relics which extended over many months.

I wish to express my indebtedness to Dr Robert Munro for permission to make use of an article by him on the crannog; to Professor Bryce for his report on the bones; to Mr Curle for his examination of and remarks on the pottery; to the Rev. F. Odo Blundell, O.S.B., for invaluable assistance and advice; to Dr Galbraith, Dingwall, for placing at my disposal his extensive knowledge of the history and antiquities of the district, and for rendering valuable aid in the excavations and in photographing relics; to Dr Maclean, of the Seaforth Sanatorium, Dingwall, for assistance in identifying relics and specimens; to Colonel Warrand of Bught and Professor W. J. Watson, LL.D., for historical references; to Mr D. Macdonald, architect, Dingwall, for executing a plan of the island, sections of pits, and drawings of worked timber; to Mr John Shaw, Dingwall, for drawings of the woodwork in the pit bottoms, and for very great assistance in investigating the pits; to Miss Ledingham, art mistress, Dingwall Academy, for drawings; to Lieut.-Commander Hamblin, R.N., for photographs; and to Mr John Macfarquhar, Dingwall, and Mr Ronald D. J. Fraser, Strathpeffer, for strenuous assistance in the excavations. Special thanks are due to the proprietor of the island, Sir Arthur Mackenzie, Bart., of Coul, and to the tenant, Mr Corbett of Kinellan, for giving permission for the excavations; and to Mr Wallace, managing director of the Spa Hotel, Strathpeffer, for giving the use of a boat, without which the investigation of the island would have been impossible.

APPENDIX I.

REPORT ON THE BONES FOUND IN LOCH KINELLAN CRANNOG.

By Dr T. H. BRYCE, Professor of Anatomy, Glasgow University.

The bones from Kinellan crannog submitted to me for identification by Mr Fraser include the following species—ox, horse, pig, sheep, and red deer.

The bones are much broken, and the long bones have evidently been split for the marrow.

The bones are mostly those of a small ox. Every part of the skeleton is represented, but unfortunately only fragments of the skull have been

recovered; two horn bones, however, prove that the variety was a short-horned variety. In the absence of the characteristic frontal region it is not possible to say positively that the horns are those of *Bos longifrons*, the "Celtic shorthorn," which is so common on early sites, but there is a strong probability in favour of this identification. That a larger breed is also represented is indicated by the distal end of a humerus, which is distinctly larger than the other specimens.

The horse is represented by a molar tooth and two bones, the talus and calcaneum. The bones are of small size, somewhat heavier than those of a donkey, and prove that the inhabitants of the site possessed a breed of pony.

The pig bones include fragments of skulls, jaws, and limb-bones, as well as some separate teeth. The size of the jaws and of the canines indicates a domestic breed of pig. They are not massive enough for the wild boar.

The sheep bones are few in number, comprising fragments of vertebræ, skull, jaw, and limb-bones. The size of the bones suggests a small and light breed, but the metacarpals and metatarsals are not of the specially slender proportions characteristic of the slender-legged variety of sheep.

The red deer is represented by a fragment of antler, and some broken limb-bones.

A few bones of birds occur in the deposit. They include two portions of skulls of a species of small bird which I am unable to identify owing to the absence of distinctive parts; also the premaxillæ of a water bird, probably duck.

Two fragments further represent a fairly large teleostean fish, but are too imperfect for identification. One of the pieces is a broken clavicular section of the pectoral girdle, and may possibly represent the salmon.

APPENDIX II.

REPORT ON THE POTTERY FOUND ON THE ARTIFICIAL ISLAND IN
LOCH KINELLAN. By ALEX. O. CURLE, Esq., Director of the National
Museum of Antiquities, Edinburgh.

I now have had time to give some attention to the shards of pottery which you sent me from the lake-dwelling at Kinellan. With the exception of some quite modern fragments of pottery and a piece of delft which is probably seventeenth or eighteenth century, they all appear to be pieces of vessels of contemporary make. As far as it is possible to tell, the form appears to have been that of a globular rather than a quasi-cylindrical pitcher, and this feature leads me to believe that the date of

manufacture lies somewhere between the end of the fourteenth and the end of the fifteenth century.

I have found four pieces of a handle which join, and I am putting them together for you, so I shall be able approximately to draw you out a sketch of the form of vessel which they represent. The piece of a neck and shoulder 2.18 also shows the type.

A characteristic feature of the pottery of this time is a deep, impressed thumb-marking at the junction of the handle to neck and bulge.

As a rule, in pottery of this date one finds around the base struts produced by pressing down the clay from the sides so as to counteract the marked convexity of the bottom such as is shown on 2.19 and 18.1, but this feature is here absent.

There appear to be only two pieces which show any signs of ornamentation, but these do not give me any further information as to the period of manufacture.

APPENDIX III.

WORKED TIMBER ILLUSTRATED IN FIGS. 14 AND 15.

I. Shaped log, Pit 16 (*v. fig. 23*).

II(a). Mortised log, Pit 6 (*v. fig. 23*).

II(b). Spar found in mortise hole of II(a) (*v. fig. 23*).

III(a) }
III(b) } Mortised log, Pit 6.
III(c) }

IV(a) }
IV(b) } Log, with end double curve-checked, Pit 6.

V. Pile pulled out of floor of lake, Pit 13.

VI(a) }
VI(b) } Mortised log found resting on gunwale of canoe, Pit 6 (*v. fig. 22*).
VI(c) }

VII. Stake from Pit 14.

VIII(a) }
VIII(b) } Log, with dome-shaped recess on under surface, Pit 13 (*v. fig. 16*).

IX(a) }
IX(b) } Found in Pit 13. • Was evidently used as a pile (*v. fig. 17*).

X. Pointed pile, Pit 13.

XI(a) }
XI(b) } Mortised log, Pit 16 (*v. figs. 10 and 11*).

XII(a) }
XII(b) } Mortised log, Pit 16 (*v. figs. 10 and 11*).

- XIII(a) } Log with dome-shaped recess, Pit 13 (v. fig. 16).
 XIII(b) }
 XIV(a) }
 XIV(b) } Found in Pit 18 (a) (v. fig. 23).
 XIV(c) }
 XV(a) } Log with forked end and curved check, Pit 13 (v. fig. 16).
 XV(b) }
 XVI. Split tree-stem, Pit 17 (v. figs. 12, 23).
 XVII(a) } Found used as a horizontal log in Pit 6. Note the notch near
 XVII(b) } point (v. fig. 23).
 XVII(c) }
 XVIII(a) } Found in Pit 6 (v. fig. 23).
 XVIII(b) }
 XIX(a). Section of gunwale of canoe (fig. 22).
 XX. Oak stopper, Pit 19 (a) (scale magnified 10 times).

MONDAY, 12th February 1917.

W. MOIR BRYCE, Vice-President, in the Chair.

A ballot having been taken, the following were duly elected:—

Corresponding Member.

ALAN REID, F.E.I.S., The Loaning, Merchiston Bank Gardens.

Fellows.

ANDREW FORGAN, 278 2nd Avenue, Maisonneuve, Province of Quebec, Canada.

WILLIAM FRASER, 17 Eildon Street.

JAMES GERARD GRAHAM, Captain, 4th Battalion The Highland Light Infantry, Carfin, Carluke, Lanarkshire.

ALASTAIR URQUHART, Staff Captain, XVII. Corps (Heavy Artillery), B.E.F., 13 Danube Street.

The following Donations to the Library were announced:—

(1) By HIS MAJESTY'S GOVERNMENT.

Calendar of Inquisitions Post Mortem and other Analogous Documents. Vol. ix. Edward III. London, 1916.

(2) By THOMAS SHEPPARD, M.Sc., F.G.S., F.R.G.S., Editor and Author.

Hull Museum Publications, Nos. 104, 106-108—Quarterly Records of Additions. No. 109—Medals, Tokens, &c., issued in connection with William Wilberforce and the Abolition of Slavery. Pamphlets.

(3) By the NORSK FOLKEMUSEUM.

Norske Haver i Gammel Tid. Avd. I. and II.

Norske Haver i Det XVIII. og XIX. Aarhundrede.

Both by Carl W. Schnitler. Christiania, 1915 and 1916. 4to.

PURCHASES.

For the Museum.

Carved Stone Ball of hornblende schist, maximum diameter $2\frac{3}{4}$ inches, weight 462.6 grs. (*circa* 1 lb. $\frac{1}{4}$ oz.), with four discoid projections, found in August 1915 at Stoer, Sutherland, in the vicinity of a small stream, by William Munro, Crofter.

For the Library.

The Romano-British Site on Lowbury Hill in Berkshire, by Donald Atkinson. University College, Reading, 1916. 8vo.

Calendar of Writs preserved at Yester House, 1166-1503. Scottish Record Society. Part lxxiv.

The following Communications were read: -

I.

AN UNDERGROUND GALLERY RECENTLY DISCOVERED IN THE ISLAND OF TIREE; WITH A NOTE OF ANOTHER IN THE SAME ISLAND. FROM A PLAN BY SIR HENRY DRYDEN. BY GILBERT GOUDIE. F.S.A. SCOT.

In the month of April last year Mr John M'Intyre, tenant of a small farm at Kilkenneth, on the west side of Tiree, when engaged in ploughing, came upon a stone beneath the surface, his examination of which led to the discovery of the subterranean passage which it is the purpose of this paper to describe. The discovery was soon noised about in the district, vague newspaper announcements following; and shortly afterwards it was brought under the notice of the Society by Lady Frances Balfour, an aunt of the Duke of Argyll, the sole proprietor, interested in all matters connected with the district, and who has a residence in the island.

I had previously arranged to make a tour of exploration among the isles of the Outer Hebrides at the time; and when the proposal was made that I should visit the spot in Tiree, inspect the relic of antiquity, and do anything that might be necessary in regard to it, I willingly consented. Leaving Glasgow by the steamer *Hebrides*, the passage was made under Admiralty war regulations, by a detour along the Irish coast through Rathlin Sound, and on the 1st of June I was on land in Tiree.

Tiree, 12 miles in length and of an average breadth of 3 miles, lies to the west of the larger island of Mull in Argyllshire. Its general character is flat, but with five or six hills of no considerable height. The population by last census was 827.

The ecclesiastical antiquities of Tiree are numerous, in the shape of ancient chapels and burying-grounds, with some examples of sculptured stones. The island has, indeed, been regarded as one of the sacred spots connected with the life and labours of St Columba. In this view it was in Tiree (*terra Heth*) that he is supposed to have founded a monastery shortly after his coming to Iona in the year 565. But the civil antiquities, with which we are at present concerned, are also numerous, consisting of hill forts and circular "dunes," for the most part the equivalents in Celtic of the broughs, or "brochs," of the Scandinavian districts of Scotland—simply the modern form of the Norse term *borg*, or fortification. The dunes and other remains in the island have been amply described and illustrated by Mr Erskine Beveridge, LL.D., in his important volume *Coll and Tiree*, and his exhaustive treatment of these antiquities has made the island his own special province of research. The issue of this work in 1903 was, however, more than a dozen years earlier than the time when

the structure now under notice was discovered, and it is therefore new to scientific inquiry.

This underground gallery is not less interesting or mysterious than are the dunes. Similar structures are already known in other of the Western Isles—in Lewis, Harris, Uist, and Benbecula; and examples have been found on the mainland in Sutherland, Aberdeen, Inverness, Perth, and Forfarshire, and in Midlothian and other counties.

By far the largest and most massive of these underground structures is that at Pitcur in Forfarshire, near to Coupar Angus, carefully described and illustrated by Mr MacRitchie in his monograph *The Underground Life*, privately printed in 1892, based upon his own communication to this Society of 8th January 1900. This Pitcur gallery in height and width materially surpasses all the others which have been explored, and one cannot enter it without wonder approaching to awe. Another, circular in form, and also larger than usual in dimensions, is the Cave of the Raitt, near Kingussie, described in vol. v. of the *Proceedings* of this Society (1865). A later discovery is that on the farm of Crichton Mains, near Gorebridge, described by the late Lord Rosehill in a paper read to the Society on 8th March 1869, and printed in the *Proceedings* of that year (vol. viii. p. 105). In its size, extent, and structural form it closely resembles the gallery in Tiree with which we are now dealing. It has one peculiarity—the presence in its walls of some squared and chiselled stones exhibiting the dressing of Roman masonry, an indication of post-Roman date in its construction, if these stones were indeed part of the original building.

The site of the underground structure in Tiree now discovered is close to the dwelling-house on one of the small farms in the township of Kilkenneth, in the parish of Hylipol, on the west side of the island; and its discovery by Mr John McIntyre, the tenant, may be stated as nearly as may be in his own words:—

“In the month of April last (1916) I was ploughing ground for oats at the back of the house, about 15 feet away, when the plough struck a small stone. I began to dig it out, and a lot more of stones appeared immediately underneath. I thought this was the foundation of an old house, but when a few of the stones had been dug out I came upon what I found to be a lintel. On lifting it up, I found there was below it an opening into the ground, so low that I could scarcely squeeze myself into it until some more of the earth had been removed. I got a candle and saw that this was the opening into a long passage. The opening was blocked up with lots of stones and earth. This I removed and cleared away for about three feet in past the entrance. I was then able to crawl onward for a long distance till I found the inner end was filled up with



earth gradually sloping upwards until at the back it was about as high as the top of the side walls at the roof."

The prevailing language in the district is Gaelic, but the School Board education has made the younger generation familiar with English, and all explanations necessary were clearly and distinctly given to me.

When I reached the island I hastened to the spot, a distance of about eight miles from Scarinish, the landing-place from the steamers, where a comfortable inn awaits the traveller. At Island House, more than half way on, I was joined by Mr M'Diarmid, factor for the Duke; and after



Fig. 1. Site of the Earth House at Kilkenneth.

inspection, arrangements were made for a formal investigation, and excavation as far as might be necessary. Driving to Kilkenneth the following day, I secured the services of the discoverer and his brother, who were set to work on the difficult and disagreeable, if not also perhaps dangerous, job. Fig. 1 shows the site in the field in relation to the farm cottage, and the opening to the underground passage, at the commencement of operations. At the time when the occupancy, or use otherwise, of the gallery was discontinued, it would appear to have been left perfectly free, unencumbered by stones or refuse or derelict material of any kind, except at the inner end, as will afterwards be shown; and the accumulation on the floor, to the depth of 6 inches or so all over, is seemingly the undisturbed gathering, by percolation from the upper surface, during subsequent ages. I regret that a photographic view of the underground

interior, to note its general appearance and the character of the masonry, could not be obtained, the light of the local artist employed having failed. All that could be done was to observe the prominent features and ascertain the structural dimensions, before work was set to.

Commencing at the opening, by a steep descent from the surface, we find the entrance 3 feet 5 inches in height, underneath a substantial lintel, 13 inches thick and 3 feet in length, the passage in front narrow and dark, and the flooring a mass of wet mud. This opening would appear to have been the original entrance, the ground leading down to it as if by steps, and the covering of earth above the lintel to the surface of the field being only about 18 inches deep. Besides, from this entering point the underground passage slopes gradually downward for some distance until the normal level is reached, after which this is steadily maintained. A further excavation at the right hand of the entrance would have made the proportions more clear, but to do so would have encroached upon the field of oats, under the border of which the gallery was constructed.

For a short distance from the entrance the passage proceeds in a southerly direction then bends with a curve to the south-east, curvatures in varying directions being a curious and almost invariable feature in these structures.

The walls are of rough but well-built dry masonry, converging as they approach the top, and roofed in with strong slabs, forming a thoroughly substantial structure through which one may pass without difficulty or apprehension of danger. The passage at the commencement of operations was scarcely 5 feet in height all through, with an average width of, say, 5 feet 4 inches. At one point, about 27 feet inward from the entrance, it contracted to a width of only 20 inches, with a height underneath the lowered lintel of only 35 inches; and through this restricted opening the passage had to be negotiated with something of a squeeze. The contraction may probably have been intended to form an inner door, to be closed by a stone slab for protection against intruders, and its height was increased by about 6 inches through the removal to the surface of the accumulation there as elsewhere upon the floor, leaving the opening 3 feet 5 inches high, with a width of 20 inches as before.

The clearing out of the floor at other points, with the view of determining the original normal height of the passage, resulted in showing that the height of the side walls may now be taken at 5 feet to 5 feet 6 inches as they would stand if the floor accumulation were wholly removed. The partial clearing was accomplished by the removal to the surface of some cart-loads of earth and mud, a laborious process requiring to be done in a crouching posture, from the impossibility of standing

upright in a passage so low and so narrow, and in total darkness but for a glimmer of candle-light; and in this way the accumulation could only be collected and brought to the surface in small quantities.

The length of the gallery and its dimensions otherwise having been ascertained, the next point for consideration was the condition of its inner end, as it seemed doubtful whether the closing obstruction might be the actual termination, or merely blocked the continuation of the passage to a further distance beyond. The excavation here was more than usually tedious, a distance of about 5 feet in front of this apparent end being filled up with a mass, closely compacted, of fine clay with some admixture of earth. Sufficient of this was released and removed, accompanied with excavation to a limited extent of the harder blocking face beyond, to satisfy me that this obstruction was not the termination of the gallery but either the opening to a chamber beyond, not unusual in such structures, or a prolongation of the gallery itself. Uncertainty as to what the condition of the roof might be made me hesitate to expose the workers to possible danger in attempting further excavation. Without express authority from His Grace, or from the Society, I did not see my way to proceed further. But it would certainly be desirable that the terminal obstruction should be removed whenever this can be conveniently done, and the character of the entire structure be demonstrated. If the floor, say about 240 feet of superficial area, were cleared out to the depth of about 6 inches, as has already been partially done by the work which has been described, the whole passage would be made free of obstruction, and could be traversed from end to end with comparative ease; and an excavation of no very serious kind at the further end could determine whether the continuation beyond is a chamber or a prolongation of the gallery. In the meantime, by rain and wind at the exposed entrance, and by dust and water percolation downward through the roofing, a continuous filling up upon the floor must be looked for.

The earth as removed from the floor to the surface was carefully turned over by myself, without any animal remains being discovered, or any relics of human industry or use except fragments of pottery, for most part of a coarse kind, some hammer-stones more or less abraded, and a portion of a small vessel of dark pottery. Some pieces of a smooth pink-coloured stone were also noticed, but this, still known as "Balaphetrish marble," is said to be the product of a quarry in the neighbourhood. The fragments of pottery, etc., recovered were left in the keeping of Mr M'Intyre, the discoverer, along with items formerly secured by himself, in case the Duke of Argyll might desire to see them on the spot, or in case any part of them, though of only trifling interest or value, might seem worthy of acquisition by this Society.

The dimensions of the structure, as it now stands after the partial clearance of the interior, may be tabulated here:—

Length of gallery	say. 50 ft.
Height of entrance, underneath lintel	3 ft. 5 in.
Width of do. do.	2 .. 4 ..
Height at highest point of passage (12 ft. 10 in. from entrance)	5 .. 6 ..
Width at do. do.	5 .. 4 ..
Height at narrowest point (26 ft. 10 in. from entrance)	3 .. 5 ..
Width at do. do.	1 .. 8 ..
Height at foundation near entrance	4 .. 5 ..
Do. at inner end	4 .. 6 ..
Lintel at entrance 13 in. thick, 20 in. broad, and 3 ft. in length.	

I apprehend that my function concluded with the partial clearance which has been described, and taking the dimensions as recorded. But it may be expected that some reference should be made to the supposed origin and use of such mysterious structures in the economy of ancient life in Scotland, for to Scotland they seem characteristically to belong.

It may be affirmed that the date of their construction is, as yet, outside any certainty of human knowledge, and that associated relics are neither so numerous nor so definitively significant in character, or in assurance of connection with these remains, as to throw indubitable light upon their purpose or use, or whether they were communal property or belonged to individuals. Pennant, writing in 1799, regarded them as "repositories for the ashes of sacrifices." Some have contended that they were human habitations—"erde (or earth) houses," and "Picts' houses," as they have been for long termed where found in Aberdeenshire and elsewhere in the north of Scotland. It must, however, be clear to any unprejudiced inquirer, as was pointed out by Dr John Alexander Smith at a meeting of this Society in 1868, that "having no opening for light or ventilation, they could scarcely have been used as a permanent dwelling, but probably only as a place of occasional occupation for concealment for man or cattle, or for the storage of food or valuables." In point of fact, the accommodation might be pronounced almost prohibitory for human occupation unless for a quite limited period; and any cattle finding shelter within its walls could be of a very diminutive type only. The presence at the inner end of a large quantity of clay in plastic condition, soft and smooth, as if ready for being fashioned into any fictile vessel, would seem to afford reasonable indication that the gallery had, at all events at a late period in its history, served as a place for the manufacture of pottery. But the clay in the island is of excellent quality for the potter, and large quantities of pottery fragments are found almost

everywhere, the latest local maker of earthenware "Craggans" having died in 1896, according to information gathered by Mr Beveridge. It may therefore be unwise to assume that this collection of workable clay is necessarily of a remote antiquity coeval with the erection, or even the customary use, of the structure. The same remark applies to the so-called "Samian" ware and the "querns" or hand mills which have occasionally been found on similar sites. If these could without doubt be accepted as having been there contemporaneously with the original building, these underground galleries might with some reason be ascribed to post-Roman times. But the evidence on the point is indefinite and not wholly beyond question, and it may be well to reserve judgment on the subject in the present state of our knowledge. We may, however, cherish a hope that if a more thorough excavation of this Tiree specimen were completed in the way indicated, some further light might be thrown upon the structure itself, and upon the whole question of the age, the object, and the use of these mysterious remains.

POSTSCRIPT.

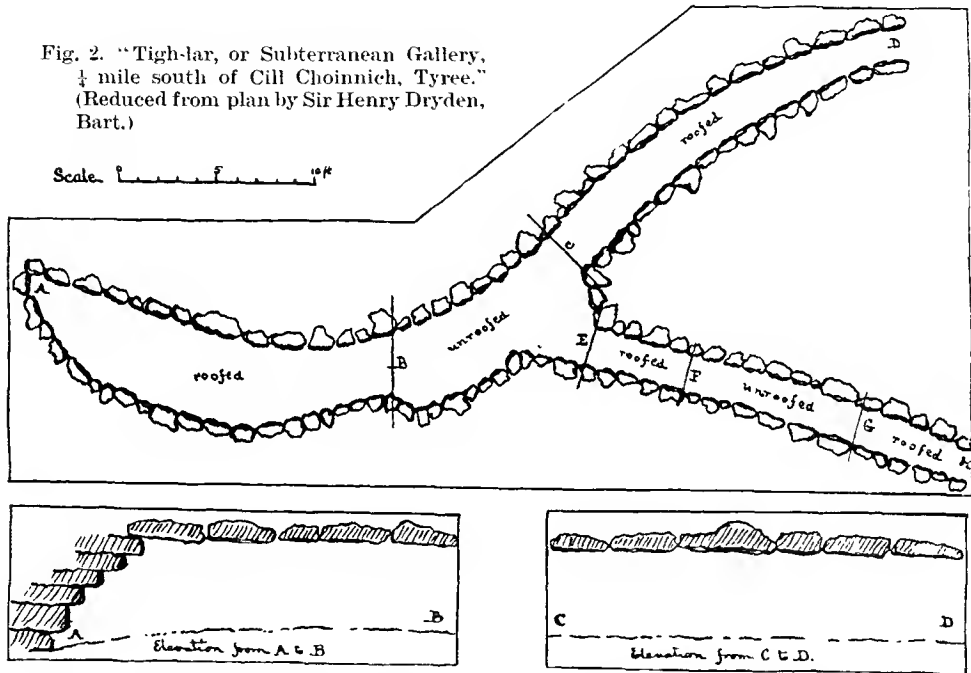
Since the foregoing was written there has been brought to my notice, preserved in the Library of the Society, a carefully drawn plan, here reproduced (fig. 2), by the late Sir Henry Dryden, Bart., an Honorary Member, of another underground structure at a short distance from that which has been described, and somewhat similar in character. It is given as "Tigh-lar, or Subterranean Gallery, $\frac{1}{4}$ mile south of Cill Choinnich, Tyree," with scale 5 feet to an inch. "Cill Choinnich" is simply the Gaelic form of Kilkenneth; and though the site is so near to the spot of my investigation, all memory of the existence of such a structure there appeared to have been lost among the natives with whom I came in contact. I am, however, indebted to Mr H. M'Diarmid, factor to the Duke of Argyll, for the following, in explanation:—

"I believe this gallery was not like the one you explored in Kilkenneth. It was on Greenhill, the neighbouring farm to Kilkenneth, and about thirty or thirty-five years ago what was then left of it was pointed out to me. To my recollection it was on a much smaller scale than the Kilkenneth structure, and only looked like a big covered drain. It was near the shore of Greenhill farm, and in a sand-bank. Owing to sand drifting, no one now seems to know the exact locality of this underground structure. What I saw of it was partly uncovered. It would be at least half a mile from the gallery in Kilkenneth. It never occurred to me to mention it to you; in fact, I had forgotten about it on account of the long period of time since it was pointed out to me."

The present seems a favourable opportunity for putting on record in

our *Proceedings* the particulars which have been preserved of the character and dimensions of this now vanished structure.

The plan shows it to be bifurcated in form, with the stem, representing the main gallery, terminating in a point and trending slightly to one side, and the forks representing passages leading into it. The extreme length to the end of either of the arms is 50 feet, but at neither extremity of the arms is there any indication given of an actual termination or of a specially constructed entrance. The distance between the outer ends of



the branch passages is shown as about 20 feet, and their respective lengths from the point of bifurcation similarly 20 feet. At each outward extremity the width of these passages is about 2 feet, and along their respective courses their width varies from 2 feet to 2 feet 6 inches.

With the meeting of the two passages a greater breadth is given to the main gallery, it having a fairly uniform width of 4 feet, except at the extreme end, and at a point B on plan, where an intake occurs on one side, narrowing the space between the walls to 3 feet.

A study of the plan favours a supposition that the passage opening to the right on leaving the main gallery has been a secondary construction. It will be observed that the walls of the opposite passage follow out truly

the curves of the sides of the main gallery, and this is made all the more apparent by a slight projection of the corner of the wall at a point on the right at the commencement of the right-hand passage, where it joins in to the main gallery at a sharp angle, and from which it is straight in direction outward to its termination.

II.

NOTE ON THREE TAPESTRY¹ HANGINGS INVENTORIED AMONG THE BELONGINGS OF MARY OF GUISE, QUEEN REGENT, AND OF HER DAUGHTER, MARY QUEEN OF SCOTS. BY R. SCOTTMONCRIEFF, SECRETARY.

According to family tradition, the three tapestry hangings which form the subject of this paper came into the possession of William Hogg,² merchant in Edinburgh, in 1692, and to him is imputed the responsibility of having mounted them in the somewhat barbarous fashion in which they now appear. These hangings in their present form have been publicly exhibited on several occasions. An account of them also appeared in January 1872 in an article contributed by the late Mr George Seton, advocate, to *The Leisure Hour*, that "Family Journal of Instruction and Recreation," as its title further bears. But they seem to be entitled to a place in a more important and permanent publication—such as the volume of our *Proceedings*—not only on account of their historical interest, but for their high artistic merit.

The history of this fine example of sixteenth-century needlework divides itself into three periods. The first extends from September 1561, when the pieces are inventoried as having belonged to the Queen Regent, Mary of Guise, to 1578, when they are inventoried as having been taken over from the Regent Morton by James VI. The second period extends from the reign of James VI. to 1692, at which date they are believed to have been acquired by Mrs Rachel Sinclair or Hog on behalf of her ward the before-mentioned William Hogg. The third and last period covers the time from 1692 to the present day. Of the first and last periods we have more or less definite information, but of the middle period we know nothing and can only conjecture. I propose to deal first with the last and, I fear, the least interesting period.

¹ These hangings have been termed "tapestry," but strictly speaking they are *petit-point* needlework; that is, they are hand-sewn on canvas and not woven. Two of them are 6 feet 6 inches in length by 1 foot 8½ inches in depth; the third, as it now exists, although of the same depth, is only 5 feet 8 inches in length. They are mounted on a screen, as shown in the illustration.

² "Hogg" seems to have been spelt at this time indiscriminately with one or two *g*'s. Andrew Hog, William's father, appears to have used one *g*; his son used two.

Family tradition has it that these hangings were acquired in 1692, as already stated, and furthermore that they were acquired in exchange for a kitchen grate and 28s. Scots. And it can be shown, I think, that there is a certain amount of foundation for this tradition.

William Hogg's father, Andrew Hogg, Writer to the Signet in Edinburgh, died in the beginning of October 1691. He had been predeceased in May of the same year by his wife Jane Sinclair, and was survived by two infant sons, one of whom died in the succeeding February, leaving the other, William, the only child who grew to maturity. Andrew Hogg left a testamentary settlement by which he appointed tutors to his children, and among these tutors was his wife's sister, Mrs Rachel Sinclair or Hog, the widow of his cousin William Hog, who also had been a Writer to the Signet. This Mrs Hog seems to have been a capable woman, for, besides taking charge of her sister's child, she acted as factor on his estate during the first year of the trust, and on several subsequent occasions.

According to our modern ideas there was an almost indecent haste in realising the deceased's property. He was buried in Greyfriars Churchyard on 6th October, and by the 24th of the month his whole household plenishings, with a few exceptions, had been roused. I imagine little advertising would be done beyond employing the services of the city bellman. What I may term "the Trust Sederunt Book" is in my possession, and it gives full details of the furnishings sold, of the purchasers' names, and of the prices obtained. It also gives details of the articles remaining unsold, twenty in number, among which is the following: "Item the kitchen chimney and standing raxes thereof one of them broken." The next year's account, which is duly engrossed in the Sederunt Book, shows which of these twenty articles had meanwhile been sold. From it we learn that the kitchen chimney and raxes were all articles disposed of, and that they had fetched the sum of £7 Scots. Names of the purchasers are not given, but fortunately Mrs Hog kept a notebook, which is still extant, and in this she was in the habit of jotting down memoranda dealing with money spent both for her own children and on behalf of her ward. From this we learn the fate of the "kitchen chimney," for in the corner of one of the covers of the book there is the following jotting: "Sold a chimney to Mrs Whiteford May 16th 1692 at 2' St^e ye Stone for qch I have received three piece of hanging at 5 lib. Scots price and have given her 28 sh. Scots of money."

It has always been understood in the family that the three pieces of tapestry here illustrated (fig. 1) are the three hangings which were so acquired. Be that as it may, there is no doubt that these three pieces of tapestry were at some time or other acquired by William Hogg, and that

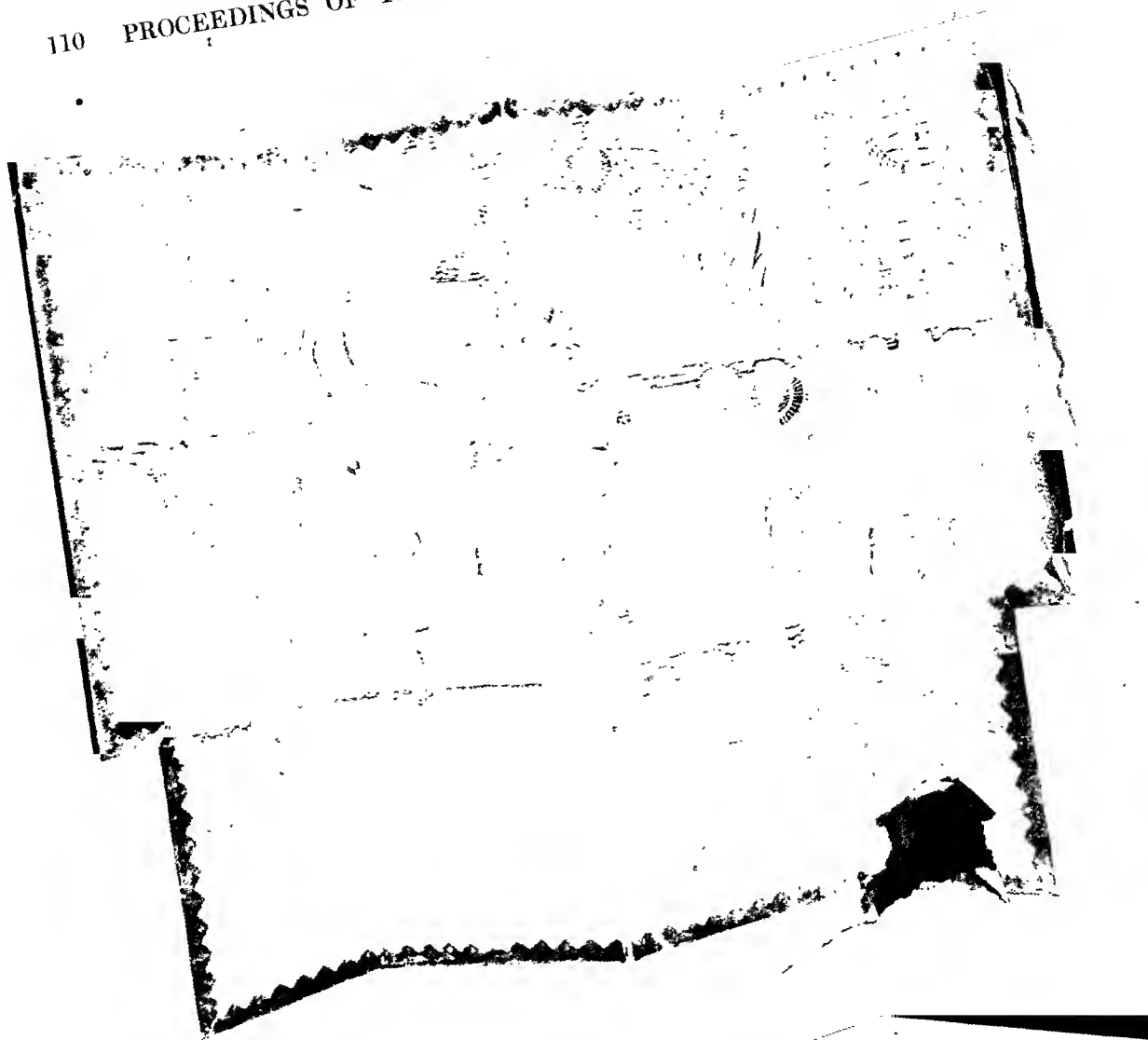


Fig. 1. "Ane tapestrie of the historie of Roboam," mounted on a screen.

they eventually passed by succession, along with his pictures, papers, and many other of his belongings, to his Scott Moncrieff descendants, as follows:—

William Hogg died intestate in April 1767, survived by one son, Thomas, by his first wife, and by four daughters by his second wife. The eldest of these daughters, Jean, married my great-great-grandfather, Robert Scott Moncrieff. The son, Thomas, married in 1757, and died intestate in 1784. He left no sons, so that the male line of Hogg died out; but he was survived by two daughters, the younger of whom married her first cousin (half-blood), William Scott Moncrieff, eldest son of the aforesaid Robert Scott Moncrieff and of her father's half-sister Jean Hogg. This double connection makes it a little difficult to say definitely when any particular article passed from the Hoggs to the Scott Moncrieffs, and this difficulty is further increased by the fact that Robert Scott Moncrieff purchased all his brother-in-law's furniture from his creditors when the latter got into financial difficulties in 1769. This furniture was allowed to remain in Thomas Hogg's possession, and was not handed over to the Scott Moncrieffs until the death of his widow in 1812. Whether the screen passed to Robert Scott Moncrieff on the death of his father-in-law William Hogg in 1767, or later to his son in 1812, I cannot be certain,¹ but it was undoubtedly in the house of the latter, William Scott Moncrieff, my great-grandfather, when my father lived with him as a boy. My father tells me that it was then known, and that he believes it had always been known, in the family as "Queen Mary's screen," from some tradition that it had belonged to her.

William Scott Moncrieff died in 1846, when the screen passed to his eldest son Robert, and it was when in his possession that light was thrown upon the earlier history of the hangings. His eldest daughter, while studying the screen one day, suddenly recognised the Biblical story depicted on it—a flash of inspiration, one might almost call it, considering the misleading sixteenth-century costume in which the characters are disguised—and subsequent reference to the volume of old inventories published by the Bannatyne Club at once showed that the family tradition connecting the screen with Queen Mary had some solid foundation in fact. To these inventories I shall now refer, but, in passing, perhaps I may be allowed to add that my grandfather bequeathed the screen to his eldest daughter as a reward for her intelligence, that she gave it to my father, who in his turn gave it to me.

The story so rendered is unmistakable once the incidents represented

¹ From the fact that it is not mentioned in the inventory of the furniture of Thomas Hogg when he became bankrupt, I am inclined to think that it must have formed part of Jean Hogg's succession to her father, and so came into the family in 1767.

have been pointed out. It is the history of Rehoboam and of his rival Jeroboam as set forth in the Book of Kings, and the first mention of the hangings occurs in the "Inventaire of the Queene Regentis movables quhillkis wer deliverit to me Servay de Conde vallet of chamber to the Q in presence of Madamemoiselle de Raulle. The hail was ressavit in the moneth of September the yeir of God J^m V^c LXI." Mary of Guise, Queen Mary's mother, who was Queen Regent of Scotland, died in Edinburgh Castle on 11th June 1560, and the inventory in question was made when the *valet de chambre* of her daughter, who had returned to Scotland a young widow, took over the Queen Regent's effects from her representatives. As there is another inventory dated in November of the same year dealing with the Queen Regent's effects in Holyrood, I have little doubt that this inventory dealt with her effects in Edinburgh Castle. The entry of particular interest in connection with the screen occurs under the heading of "Tapestrie," and is as follows: "Item ane tapestrie of the historie of Roboam contening foure peces." The tapestry now consists of three pieces only, but when we come to consider the story it will be seen that the representation of an important episode in Rehoboam's career is wanting.

This inventory is a particularly interesting one, for it was gone over in 1569, after Regent Moray had assumed the reins of government, by the same Servay de Conde on behalf of Queen Mary, and by Mr John Wood¹ (the Regent's secretary), who took delivery of the effects on behalf of the Regent. The margin is annotated, presumably by Servay de Conde, with information as to the fate of each particular item. Thus we learn what material had been used up, which beds had been worn out, where this article or that was housed at the moment—Loch Leven or Stirling Castle,—which articles had been given away, and which had formed the furniture of Kirk o' Field and had been "tint" in the King's "ludgeing" on that tragic night in February 1567 when he was blown up. Against the item of the "Roboam" tapestry is marked "In Striveling."

These hangings were, however, back again in Edinburgh Castle in 1578, for they are referred to in "The Inventair of the Jowellis plenissings, artaillierie and munitioun being within the Castell of Edinburgh," etc., which is dated 24th March of that year.

This later inventory was made on the occasion when the nobles, sick of the tyranny of Regent Morton, declared the youthful James of age, although only twelve years old, and deposed the Earl; and it records

¹ See footnote 4, p. xviii of *Inventories of Mary Queen of Scots*, published by the Bannatyne Club. The above seems a more likely explanation of Mr John Wood's signature being appended to this inventory than that given therein. Had the older inventory been copied and used, the heading most certainly would have been altered.

what was then handed over by the Regent's Commissioners to the King's Commissioners. There again, under "Tapestrie," we find mention of the history of Rehoboam, but on this occasion the set is stated to consist of five pieces. The entry runs: "Five pece of the historie of King Roboam."

In spite of this difference, there can be little doubt that the two entries refer to the same set of hangings. Nor need the fact that this set of hangings was again in Edinburgh Castle call for any out-of-the-way explanation, as not only tapestry but beds and other furnishings were moved from place to place as the Court required them.

The increase in the number of pieces may be due to an additional piece having been added between 1561 and 1578, and a possibility that this additional piece may have been sewn under the direct supervision of Queen Mary herself adds greatly to the interest. On the other hand, the increase is much more likely to be due to the inclusion by mistake of a hanging from another set. In several cases the numbers of pieces of which particular sets consisted as stated in the two inventories do not agree. For instance, the history of Count de Foix of Ravenna is stated in the first inventory to contain "sevin peces," and in the second to contain only "fourre peces." As probably there was nothing in costume to distinguish the characters of this mediæval story from the characters of the Biblical story—both no doubt being clad in sixteenth-century dress—and assuming that the pieces of the two sets were something of the same size, what more easy than that a mistake should be made and a piece from one set included in the other set? This of course is but an instance; but when we remember that, besides the tapestries mentioned in detail in this inventory, reference is also made to "sundrie sorts small and greit to be speciallie designit heirefter Threscoir seventene peces," we can easily understand how ample was the opportunity for mistake. There is another reason why I think that four was probably the correct number, and that is, that while the representation of Rehoboam's story—as we shall afterwards see—obviously requires one piece to complete it, I doubt if an artist would find material enough for two more.

So much for the first and last periods of the history of the hangings. What can we say about the middle period? I have no doubt that these tapestries remained safely in the royal keeping as long as King James remained in Scotland; but what happened to them after he left in 1603 and until we find them in 1692 in the hands of a dealer?—for such I am convinced the Mrs Whiteford mentioned to have been.¹

¹ My reason for conjecturing that Mrs Whiteford was a dealer is as follows:—I see from the roup roll of William Hogg's furniture, which as already mentioned is engrossed in the Sederunt Book, that she was a large purchaser of such articles as a dealer would be most likely to buy. Furthermore, she helped officially at the sale, and along with Mrs Hog and Thomas George, writer in Edinburgh, clerk of the roup, she signs the docquet at the end of the roup

• We know that Holyrood had been denuded of its plenishings by June 1603,¹ and doubtless the Castle had suffered in a similar manner. No doubt much of the furnishings went to England with the King, but much had also been removed in a more clandestine way, as is clearly indicated by an order of Charles I. in June 1626 to the Master of the Wardrobe in Scotland, to take measures for recovering all "hingings and tapestrie plate or other stuffe and plenishing" belonging to the King.² Probably the "Roboam" hangings were amongst those sought for at this time; but even assuming that they were still in the royal keeping in the Castle, or in Holyrood, what chance had they of remaining *in situ* during the troublous times that followed?

The Castle was besieged and entered by Cromwell's troops in 1640; again besieged and taken in 1689, when it was so gallantly defended by the Duke of Gordon. Holyrood was occupied by Cromwell's infantry in 1650, and set fire to by mistake on 13th November of that year. It may be difficult to say by whom or under what circumstances these hangings were removed, but there is little difficulty in imagining half a dozen ways in which they might have been taken and might have found their way to a dealer's store.

Turning now to the tapestry itself, we find that the scenes depicted on it deal with the history of those rival monarchs Rehoboam and Jeroboam, as related in 1st Kings from about verse 26 of chapter xi. to verse 18 of chapter xiv. The story begins in the left-hand corner of the middle strip, where we see Jeroboam and the Prophet Ahijah, with the walls and towers of Jerusalem in the background. It will be remembered that towards the end of his reign Solomon, struck by the energy and capacity of Jeroboam, then a young man, had advanced him to be ruler over the house of Joseph, and how, as Jeroboam was leaving Jerusalem one day, he was met by Ahijah, who took the new garment that he (Jeroboam) was wearing, and, having torn it into twelve pieces, gave Jeroboam ten, symbolising that he should succeed Solomon as King over the ten tribes of Israel, while Rehoboam, Solomon's son, should succeed to the kingdom of Judah alone. The tapestry depicts the Prophet with two pieces of the garment in his hands and the ten pieces lying on the ground at his feet. Solomon heard of this meeting, and Jeroboam not unnaturally had to fly to Egypt.

The next scene is King Rehoboam with his Court—a young counsellor

roll. In this docquet she is described as the widow of "Jon Whytefoord," writer in Edinburgh. The first Account of Charge and Discharge shows that she was paid a fee of lb. 6, 12/ Scots for helping at the sale. This was the same fee as was paid to Thomas George.

¹ Inventar of the Movables of Holyruidhous, 1603.

² Secretary Sir Wm. Alexander's Register of Royal Letters, 1626-31, p. 27, MS. Register House.

on his right hand and an old one on his left. Further to the right (not of the King, but of the section) we have a gesticulating figure which may be intended for Jeroboam, who on the death of Solomon had returned, and who had been made the people's mouthpiece in bringing their grievances to the ears of the King. Rehoboam, it will be remembered, followed the advice of his young counsellors, and replied that instead of diminishing he would increase the burdens to be borne by the people. This episode is narrated in the first half of the twelfth chapter, and the episodes which follow in the second half of the chapter are those which must have formed the subjects of the missing hanging. These episodes are the chastisement of the people with scorpions instead of whips, the stoning of Adoram, who was sent to collect the tribute, and the election of Jeroboam as King of Israel.

The lowest strip on the screen must have originally formed the third of the set. The scenes depicted on it are laid at Bethel and are taken from chapter xiii. They show in the first place King Jeroboam worshipping at the altar which he had set up there to the two golden calves, and, standing by, the man of God, who came to warn him of his sin and of his fate. It will be recalled how this man of God refused to break his fast in Bethel, as the Almighty had forbidden him to do so, but that an old prophet who resided there sent and recalled him, and induced him by a falsehood to partake of food with him. In the right hand of the hanging the two prophets are seen at meat, waited on by a black page. The fate of the unfortunate man of God is depicted in the background of the top and last hanging. After his meal he set out on his return journey, but was promptly killed by a lion on account of his disobedience, "and his carcase was cast in the way, and the ass stood by it, the lion also stood by the carcase." Towards the right-hand side of the top strip may be seen the ass and the lion and the carcase.

Chapter xiv. deals with the illness of Jeroboam's little son Abijah. The scene depicted in the left-hand corner of the top strip shows the child on his bed of state, with his mother bending over him and a maid of honour waiting on him. Then we see the King sending the Queen with presents to the Prophet Ahijah, now an old man, to try to ascertain from him the fate of the child. It will be remembered that she went disguised, but that the prophet recognised her and gave her the heavy tidings "when thy feet enter into the city the child shall die."

On the right of the hanging, at the door of Ahijah's house are seen the Queen and her attendant with the present of the loaves and cracknels and cruse of honey, and the Prophet speaking to them.

If we assume that the lost hanging contained representations of the events narrated in the second part of the twelfth chapter, there are practi-

cally no other episodes left in the lives of these two monarchs which it would have been possible to portray on canvas. I think we may therefore safely conclude that four, and not five, pieces formed the original number of the set.

In conclusion, allow me to say that although I have given for what it is worth the traditional history of these hangings since they came into the possession of my forebears, I quite see that the proof of that history is not altogether conclusive. It may have been another three hangings which were acquired in 1692 in exchange for the kitchen grate.

Fortunately, however, the genuineness of these relics does not depend on the truth of this statement, nor on the undoubted fact of the long period during which they have been in the family. Their pedigree is writ large on their face. No doubt can exist as to their being genuine sixteenth-century needlework, and that of the finest quality. They resemble so much in size, shape, design, and workmanship three hangings belonging to the present Earl of Morton, which his ancestor the Regent is said to have acquired from Queen Mary's belongings—a statement there is no reason to doubt—that one cannot help thinking that they must have been the work of the same hands. This in itself would have been an indication of their origin, but we have a surer proof in their subject-matter. Had the subject been a hackneyed one such as the Judgment of Solomon, or the Choice of Paris, a reasonable doubt could have existed as to their identity with the hangings inventoried; but it is so extremely unlikely that there should have been in Scotland at that time two sets of fine needlework dealing with an unusual subject like that of Rehoboam, and consisting of something like the same number of pieces, that one is irresistibly driven to the conclusion that these pieces are one and the same with those mentioned in the inventories, and that they have actually adorned the walls of the royal apartments in the Castles of Edinburgh and Stirling when these were occupied by that most beautiful and unfortunate of women, Mary Queen of Scots.

III.

A FLINT WORKSHOP ON THE HILL OF SKARES, ABERDEENSHIRE.

BY J. GRAHAM CALLANDER, SECRETARY.

No county in Scotland is richer in prehistoric flint relics than Aberdeenshire, which is probably explained by the fact that the only extensive deposit of flint in the country occurs within its boundaries. The presence of flint nodules has been noted in other parts, as in the raised beaches round the coast, but they exist in superabundance only in Aberdeenshire, where the deposit extends diagonally across Buchan for a distance of eight or ten miles. Implements fashioned from this material have been collected in large numbers in many parts of the county, even in such a remote corner as the Cabrach, near the source of the Deveron, and I am able to report a site where they were manufactured well up Strathdon.

The site of the flint factory, the subject of this paper, lies on the Hill of Skares, in the parish of Culsalmond, in the Garioch,¹ a highly cultivated stretch of country, famous as a corn-growing district, which lies near the centre of the county. The greater part of the Garioch consists of a large natural basin, broken up by small, rounded hills and ridges, and drained by the river Ury and its tributaries: its northern and eastern boundaries are marked by the Foudland Hills and a lower range which extends eastwards and then south as far as the hill of Barra; while on the south, Benachie, a very beautiful hill with three prominent peaks, separates it from Donside and the Vale of Alford. The parish of Culsalmond, forming a north-western sector of the basin, sweeps up to, and includes, the hills of Skares and Tillymorgan, the former a hog-backed hill rising very steeply on its northern flank and sloping more gradually on its southern face. The top is covered with heather, which is girdled by a belt of trees on the middle slope, and the highest point attains a height of only 1078 feet above sea-level.

A rough cart-track makes its way up the southern slope of the hill, and where it emerges from the trees strikes sharply towards the summit of the western shoulder.² Some 20 yards west of the turn in the track, near the edge of a shelf on the hill-side, about 300 yards south of the

¹ Locally pronounced *Gaerry*, the article always being used.

² This part of the hill is named "Hill of Killmidden" on the O.S. map, but I think the name is wrongly spelt. This was the old name for the whole hill of Skares. I have only heard it once used, and then it was distinctly pronounced Culmedden. In Macdonald's *Place-names of Strath-bogie*, p. 24, it is "Culmeadden," meaning "the hill-back of the middle," or "middle hill." Certainly "the middle back" accurately describes it, as it lies between two higher hills, Foudland and Tillymorgan.

highest point in the hill, at an elevation of 950 feet above sea-level, is the place where the flints were found. It is a dry, sunny spot, sheltered from the north by a quick rise in the ground, and commanding a very fine and extensive view in the opposite direction. To the south and south-east lies the fertile Garioch, studded with numerous plantations of trees, and to the south-west appears the more rugged upper part of Strathbogie with the Buck o' the Cabrach rising behind. Three important prehistoric sites stand out prominently in the landscape—the vitrified forts on Dunnydeer and Tap o' Noth, and the massive stone fort on the Mither Tap of Benachie.

My attention was attracted to the site of the workshop—if we may use the term—some twenty years ago, by the presence of three or four skelbs of flint, of different colours, lying on the upturned edge of one of the wheel-tracks. A few minutes' picking with a pocket-knife revealed some others, from which it was evident that this was a place where flint implements had been fashioned in early times. The soil here, as over the higher part of the hill, is only about 3 inches in depth, and consists of a mixture of slaty soil and decomposed moss and heather. It took several days to examine the site, although the whole flint-bearing area extended over a space of only 9 feet in diameter, because there was no other method of separating the flints from their half-peaty matrix than by sifting the soil through the fingers. Every fragment of flint seen, no matter how small, was picked up, and ultimately about as much as could be held in one hand was recovered. The chips, which showed the usual numerous varieties of yellows and reds seen in Aberdeenshire collections of flint, were small, as a rule varying from the size of a pin-head to little more than $\frac{1}{4}$ inch across; a few of larger size were found, but none reached an inch in greatest diameter. The point of a leaf-shaped arrow-head, a scraper, and part of another worked flint flaked all over the surface were also found. About 20 yards to the east, at the bend in the cart-track, the basal portion of a second leaf-shaped arrow-head was also picked up. Nothing to indicate the kinds of tools used to produce the flakes was seen, and no traces of fires were observed. Many of the chips, no more than $\frac{1}{4}$ inch in size, showed that a smaller chip had been flaked off before they had been detached from the original flake. Trial diggings were made in a number of places in the vicinity, but they failed to produce a single fragment of flint. I think I have searched every rabbit-burrow on the hill—and they are very numerous—but I have never noticed a piece of flint thrown up by these animals. However, on some spaces that had been "skinned" in cutting "sods" for fuel, on the top of the western shoulder of the hill, I have got a barbed arrow-head and several other small flint implements.

Although this discovery resulted only in the recovery of a handful of chips and three worked flints, it is of some importance, because the number of discoveries of Scottish prehistoric flint workings recorded is not numerous, and, while it is quite different in character from any of these, it is complementary to some of them.

Before referring to recorded Scottish sites where flint was worked, I may mention several new localities which have been brought to my notice. On rough ground on the hill-side above the farm of Broomhill, Strathdon, is a spot where flint flakes used to be found in considerable numbers. It was a regular source from which the neighbouring farming population got their supply of flints wherewith to light their pipes. When I visited the place, about three years ago, there were only a few small-sized chips to be seen; but when we consider that flakes of a size suitable for use with the "fleerish" were found formerly, we may infer that the deposit originally contained many fair-sized flints. I have been told of a spadeful of chips having been exposed in casting peats in the Moss of Wartle, parish of Rayne: of a barrowful (probably an exaggeration) found while digging a ditch on the farm of Torries, parish of Oyne; and of a quantity unearthed in an excavation for a proposed private bridge over the Shevock, above the farm of Wraes,¹ parish of Kennethmont.

The hill of Skelmuir, in Buchan, is well known as a place where flint flakes are numerous, and some good examples of anvil-stones, of which we have several specimens in the Museum, have been found there. I have heard local collectors of antiquities speaking about the flint "smiddies" on the hill, but I have been unable to find a printed description of any of these sites. At various places on both sides of the river Ythan, between Ellon and the sea, flint chips and flakes have been found in numbers sufficient to indicate the "very spots where the people seem to have sat and wrought at them"; they also occur on the surface of some of the kitchen-middens in the same district, and more plentifully in the neighbourhood of some of the shell-mounds; and at one place on the Sands of Forvie, which lie to the north of the estuary of the Ythan, not only were abundant chips and flakes seen, but on turning up the underlying soil a stratum of black carbonaceous matter, apparently the remains of numerous fires, was met with.² Large numbers of flint flakes were discovered on what once had been a dry knoll in a wettish tract of country,

¹ Wraes is locally called *Vraes*, and the same peculiarity in pronouncing the *w* as *v* is seen in other words beginning with *w*. Wrangham, a farm three miles distant, is pronounced *Vrangham*; wright, *vricht*; wrong, *vrag*; wrought, *vrocht*; and wreath (of snow), *vreath*. A terminal *w* is sometimes pronounced in the same fashion: snow becomes *snyaave*; sow (corn), *shaave*; maw (sea-maw), *myaave*; law (hillock), *lyaave*; and *tyaave*, to struggle, may be cognate with the Old English verb *tew*, to lug or pull.

² *Proc. Soc. Ant. of Scot.*, vol. vi. p. 240.

within "an area of about 15 to 20 yards in circumference," on the Black-hill, near Boddam.¹ There is a very good record of a discovery made while reclaiming some moorland at Hindstones, parish of Tyrie, in the northern part of Buchan, where at least a peck of flakes, ranging from the breadth and thickness of the hand to about $\frac{1}{2}$ inch in breadth, were found in a hole about 1 foot deep scooped out of the red subsoil, quite near a "Picts' circle," one of a group which once existed there. The discoverer carefully notes that there was a complete absence of dressed flints.² About a hatful of small, flattened pebbles of flint split in two by a blow on the edge, some of the moieties of which fitted exactly, were recovered from a stone cist found at Cross-stone, near Ellon.³ These are all Aberdeenshire examples, but there are a few more, which fall to be noticed, in other parts of Scotland.

The supposed site of a manufactory for arrow-heads was discovered on the Bin Hill, near Cullen, Banffshire.⁴ Sir Daniel Wilson mentions the discovery, about 4 miles north of Port Ellen, Islay, of a cist containing a human skeleton, and a large quantity of flakes and chips which on being removed from the grave formed a heap measuring 18 inches to 2 feet in height, and the finding of a quantity of flakes in cists which were discovered under two cairns on the estate of Wells, Roxburghshire.⁵ Important discoveries of large numbers of flint cores, flakes, chips, and slightly worked objects have been reported from the 30-foot raised beach at Campbeltown, Argyll, in circumstances which showed that they had been worked during the formation of that beach, when the water encroached much further on the land than it does at the present day.⁶ The first find was at Dalaruan, in the north-west part of the town, where a Bronze Age cinerary urn and incinerated human bones were found in a cavity partly excavated in the gravel of the beach. The occurrence of the flints in the beach underneath the urn showed that the manufacture of the flint had taken place long anterior to the Bronze Age burial. The second find took place at Millknowe, some 300 or 400 yards south-west of Dalaruan, where flakes and shreds of flint were discovered in great abundance in a dark layer covered with 2 feet of shingle and with the same depth below. This dark deposit, evidently produced by the occupation of the site by a prehistoric people, extended a distance of 7 yards, varied from 3 inches to 6 inches in thickness, and gradually tapered out at the edges. Besides the flints, it contained fragments of burnt wood and numerous animal bones, with a few fish bones. A zinc bucketful

¹ *Proc. Soc. Ant. of Scot.*, vol. x. p. 512.

² *Ibid.*, vol. xxxvii. p. 366.

³ *Ibid.*, vol. vi. p. 245.

⁴ Evans, *Ancient Stone Implements*, second edition, p. 280.

⁵ *Prehistoric Annals of Scotland*, second edition, vol. i. p. 177.

⁶ *Proceedings*, vol. xxviii. p. 266.

taken from the dark layer yielded no less than "four hundred and ninety-eight pieces of flint, mostly very small chips and scales, such as fly off during the process of breaking." Many pieces of quartz which had apparently undergone severe burning were observed, but no shells and not a scrap of pottery were recovered. The deposit was not confined to one spot, but little nests of similar dark material were found at frequent intervals. Three large nodules of flint, with large slices broken off each of them, weighing respectively 5 lbs., $7\frac{1}{4}$ lbs., and 10 lbs. 1 oz., were found at the same level and not far apart, about a depth of 5 feet in the beach. The discoverer had little doubt that the flint had been brought from Ireland, as the large nodules were "apparently identical with the flints of the opposite coast of Antrim." After discussion, he rejected the theories that they were transported hither by drifting seaweed or by the action of ice.

At the Glasgow Exhibition of 1911 Mr Ludovic M'L. Mann exhibited two hoards of large, selected, partly worked flint flakes found in the Rinns of Galloway, which he believed had been imported from the north of Ireland.¹ One hoard consisted of seventy-seven flakes tightly packed together, with two hammer stones, one of white quartz and the other of greywacke, and a semicircular rubbing stone. The deposit was discovered about $1\frac{1}{2}$ or 2 miles east of Portpatrick, covered by a growth of 8 feet of peat, touching the bole of a large, decayed oak tree, which had been overgrown by the peat. The other hoard, which was also found packed close together about 7 miles east of Portpatrick, contained one hundred and fifty-six flakes of flint.

The instances of flint deposits previously mentioned relate almost entirely to collections of split nodules, flakes, and chips, the only objects bearing evidence of further work being the three implements in the Hill of Skares find, and the slightly dressed Campbeltown flakes. But two discoveries of collections of secondarily worked flints found in association have been described to our Society. The first of these consisted of thirty-four roughly dressed, oval objects, twenty-eight of flint and six of a cherty nature, which were found 9 inches below the surface of the ground, on the Hill of Bulwark, Old Deer, Aberdeenshire.² They were placed between two stones about 6 inches square, without a cover stone so far as could be ascertained, and many chips were found buried to a considerable depth in the immediate vicinity. The second discovery is recorded by Mr Mann, and I was fortunate in visiting the site with him subsequently, when a few more specimens were obtained. The site occupied a slight ridge on the farm of Culmore, Wigtownshire, overlooking Luce Bay, and from

¹ *Catalogue of the Scottish Exhibition, Glasgow*, p. 813.

² *Proc. Soc. Ant. of Scot.*, vol. xxx. p. 346.

"the space of a few yards" over six hundred and thirty-six chippings and cores of flint were recovered, many of the chippings being mere skelbs; ten unbroken nodules were got, and some of the flakes bore evidence of having undergone the action of fire; eighty good implements, including arrow-heads, scrapers, saws, borers, and knives, and thirty with very slight secondary working, were found, as also four hammer-stones of quartz and quartzite, and a rubbing stone of sandstone.¹ An uncommon feature of some of the implements was the retrimming of portions of their surface, a peculiarity commented on by Mr Mann, and noted by him on some of the flint implements in his collection from other parts of Wigtownshire. The original flaking was covered with a distinct patina, while the later flaking showed sharp unpatinated ridges, from which it was inferred that they were implements belonging to an older period which had been brought to this spot to be refashioned.

Doubtless many sites approximately similar in character to some of those referred to have been turned over during farming operations and in peat-cutting in Scotland, especially in Aberdeenshire, without being recognised, far less recorded; but when those about which we have some information are compared, they throw some light on the methods and customs of the ancient Scottish workers in flint. One of the primary processes in the manufacture of flint implements is indicated in the collection of small split nodules found in the cist at Cross-stone. They were split by a blow on the edge. This, however, was not the only method of breaking down a nodule of flint into flakes. Perhaps a more frequent process was to strike off one end of the pebble and remove longitudinal flakes from its entire circumference by striking them off by blows on the truncated end. After sufficient flakes had been detached, or it was impossible to remove more, the central portion of the nodule was discarded as waste, which when found is termed a core, or nucleus, by archaeologists. From a small farm in the parish of Insh, Aberdeenshire, I have got more than one hundred of these cores, besides many implements and flakes, but they were found scattered over the farm. There must have been a considerable amount of flint-working on this place, the raw material used being complete nodules which, so far as we know, had been brought here from a distance of over 20 miles, as there is no known natural flint deposit nearer than Buchan. This would seem to indicate a business in raw flint radiating from Buchan for long distances over the north-east of Scotland. The site of the Strathdon flint working lies nearly 40 miles as the crow flies from the nearest Buchan deposits; and as much of the intervening country is still rough and hilly, we can realise that it was a matter of no little difficulty for the inhabitants of

¹ *Proc. Soc. Ant. of Scot.*, vol. xlii. p. 329.

the hill-country to secure their supply of this very necessary material during the Stone and Bronze Ages. The flint-using people on the Bin Hill, Cullen, had a flint supply nearer at hand on the shore at Boyndie Bay, west of the town of Banff.¹ The Campbeltown discoveries, which fortunately were carefully exploited and clearly recorded, were surprisingly unproductive of finished implements, such as scrapers or arrow-heads. It would appear that the flint-workers had their raw material brought from Ireland to the head of Campbeltown Loch, not in small quantities, but, as has been suggested, by the canoe load, had squatted down on the raised beach there at the time when it was being formed, and had flaked down their flint nodules. Whether they completed the manufacture of the implements at this place and carefully removed the finished objects, or whether they contented themselves with performing the simple operation of striking off the flakes, carrying away the best of them, and leaving only the rejected pieces, it is impossible to say. In referring to this discovery, however, it has to be remembered that the relics were found under circumstances which seemed to indicate that they were fashioned during the formation of a raised beach which since that time has been elevated some 30 feet above sea-level. Not only has this rise taken place in the interval, but I have seen evidence of what I believe to be a distinct depression of the land, in widely separated parts of the west of Scotland, since neolithic times. As these land movements would probably extend over a long period, the Campbeltown worked flints seem to belong to a very remote time. This may explain the absence of well-known types of neolithic flint implements in the deposits.

The discoveries near Portpatrick demonstrate a more advanced condition of trade, inasmuch as they consisted only of fine selected flakes, apparently consignments of partially manufactured goods packed up for transport from one district to another. The theory that these two parcels of flint and the Campbeltown discoveries betoken a traffic between the north-east of Ireland and the nearest points of the south-west coast of Scotland in very early times is not at all unreasonable. Other prehistoric relics discovered in the south-west of Scotland bear traces of Irish influence. As an instance, I think it will be found that the hollow-based arrow-head of flint (not the lop-sided variety), which is not at all uncommon in Ireland though comparatively rare throughout Scotland, is found in greater numbers in Wigtownshire than in any other part of Scotland.

A further development in the Scottish flint industry seems displayed in the Bulwark find of roughly-fashioned, oval objects. In recording this discovery Dr Anderson said that they seemed "to point to another

¹ *Proc. Soc. Ant. of Scot.*, vol. x, p. 516.

variety of conveyance from the source of supply. The carriage of selected nodules from the place where they were found to the place where they were broken up for manufacture is a previous stage. We have here the material partially manufactured, roughly blocked out for arrow- or spear-heads, and apparently so treated that it may be easily transported to a distance and bartered away in places where there is no natural supply of flint."¹ To the discoveries on the Hill of Bulwark and in the Rinns of Galloway, and perhaps to those at Campbeltown, that on the Hill of Skares is a fitting sequel. The absence of cores and nodules, either broken or whole, and the presence of small flakes only, seem to indicate that the flints were brought there in a partially manufactured condition, either as simple flakes or perhaps roughly dressed, after which they underwent the final process of shaping and flaking. From the small quantity of waste material remaining it is obvious that the number of objects which had been fashioned must have been small, and it is peculiar that each of the three worked pieces left should represent a different class of implement. Possibly the kind of implement produced would many a time be determined not only by the original shape of the flake but by the shape it took after being further broken. The absence of all traces of fire and of any other evidence of human occupation, and the small quantity of flint chips on the site on the Hill of Skares, indicate that it was not inhabited for any length of time. It seems to have been occupied only for the time necessary to fashion a few flint implements, which operation accomplished, the flint-worker and his friends had passed on to some other place. Whether we see in this site evidence of a visit from a travelling arrow-head maker or of a local craftsman we cannot say.

The collection from Culmore indicates a site quite different in character from all the others except the one on the Sands of Forvie. Flints in the raw state, as waste pieces partly manufactured, or as finished implements of different sorts, the evidence of fire, and the presence of hammer stones and a rubbing stone, seem to indicate that more than a temporary visit had been paid to the spot. The Culmore flint folk could get a supply of the raw material in the raised beach on which they lived, and they dwelt in a district with a comparatively good climate and a plentiful food supply in the neighbouring Luce Bay, a combination of conditions found in few parts of Scotland.

Outside Aberdeenshire, flint must have been a scarce and valuable commodity in Scotland during Neolithic and Bronze Age times. I have been surprised at the number of small, irregular, pitted nodules of flint on Glenluce Sands which bear traces of attempts to remove flakes from them. It is quite evident that the flint-workers there had not a super-

¹ *Proc. Soc. Ant. of Scot.*, vol. xxx. p. 351.

fluous supply of the commodity; because if they had, it is difficult to understand why they should have wasted time in treating such unpromising material.

In recent times, granted suitable conditions, and especially before means of communication were so highly developed, the tendency was for goods to be manufactured near the source of the raw material, as in the case of the iron industry in the midlands of Scotland. This does not seem to have obtained with the flint industry in prehistoric times. Whatever future discoveries may reveal, there is no evidence, so far, to indicate that East Aberdeenshire, in spite of its abundant supply of raw material, was a great centre for manufacturing flint implements for export to other parts of the country. Doubtless many of them would be carried considerable distances, but we do not know of any large refuse-heaps which would have accumulated had there been manufacturing on a large scale, and any evidence with which we are familiar, small though it be, points rather to a trade in raw or partly manufactured material. Two papers dealing with the Aberdeenshire flint deposits, read to the Society more than forty years ago, touched on this question. The first paper stated that the examination of some of the small pits, a few yards in diameter and 12 to 18 inches deep, dug into the flint bed on a brae-face at the Den of Boddam, yielded no flakes. However, mention was made of a large quantity of chippings which had been found in the same locality by another archæologist.¹ In the second paper it was noted that no flint nodules occurred at or near the spots where flakes were found abundantly, nor in districts where nodules abounded did flakes occur, from which it was concluded that material used in manufactories must have been conveyed there from a considerable distance.² Discoveries recorded since these views were expressed in no way refute them.

These records certainly give us some information regarding the prehistoric flint trade in Scotland, but they tell us very little regarding the actual method of working the flint, of transforming the nodule into the finished arrow-head, scraper, or whatever tool was desired. Only in the Culmore find and in one of those near Portpatrick was there discovered any tool which might have been used in the manufacture of flint, and that was the hammer stone. From the conchoidal fractures and bulbs of percussion seen on flint flakes we know that they must have been struck off with a sharp blow. But, while the hammer stones may have been the instruments used for this purpose, we must remember that these objects have frequently been found on dwelling sites belonging to a period long after flint implements ceased to be made, or where no flints were seen. There is little doubt that they were used for triturating or pounding

¹ *Proc. Soc. Ant. of Scot.*, vol. vi. pp. 243, 244.

² *Ibid.*, vol. x. p. 514.

down foodstuffs. Some of the smaller examples, which have been found in considerable numbers on the Glenluce Sands, would have been of little use for this purpose and may easily have been utilised in the manufacture of flint, but others are so large that the preparation of food seems a more feasible explanation of their purpose. If required in working flint, we do not know whether they were used to strike the flint directly or as a hammer to strike a flaking tool. Two of the smallest hammer stones in my collection were found on the farm of Jericho, which lies at the foot of the Hill of Skares, in a field that borders the market-stance on the Hill of St Sairs on the south side of the farm. They were found on the highest part of the field, where many small skelbs of flint have been seen scattered over a considerable area. Flint implements have been found over the most of the farm, but this is the only place where small chips are also found in quantities. I have no doubt that a flint workshop existed hereabout, although I have been unable to locate the exact spot.

It would have been important to learn that the Skehnuir anvil-stones were found directly associated with flint flakes or chips, but I do not know if such a fact has been placed on record.

We have still much to learn about the methods adopted by the old flint-workers in producing the different varieties of implements and tools with which we are familiar. Sites of flint factories and of the habitations of the people who used the implements turned out may still be detected by careful and methodical investigation of rough country and even of cultivated ground. In the event of any land being reclaimed in counties like Aberdeenshire, Wigtownshire, or Berwickshire, where plenty of implements have been found, archæologists should if possible endeavour to get into touch with the people who are undertaking the work and ask them immediately to report discoveries of flint in any form.

A few words may be said about other antiquities found in the neighbourhood of the Hill of Skares. Four farms, Waulkmill, Colpy Farm, Jericho, and Upper Jericho, encroach on the south-east and south slopes of the hill. A carved stone ball with six knobs was found on the first-mentioned farm, in the field which borders the hill on the south-east. Immediately to the south-west of this field is a croft on which is the site of the cairn where the three stone cups described by me last session were found. This site is marked on the O.S. map, which also states that a stone cist was discovered in 1860 on or about the site. On Colpy Farm, the adjoining place, the map also records the discovery of a stone axe, and the sites of a stone circle and of a cairn, between which an urn was found. To the record for this farm I can add discoveries of a flint axe and of three other stone axes, now in my collection. From the farm of

Jericho I have secured four stone axes, and from Upper Jericho three. Besides these, I have got more than one hundred arrow-heads and several hundred other implements of flint from the three last-mentioned farms.

On the right bank of the Jordan, a small burn that runs down the glen, is St Mary's Well, on the farm of Jericho. This spring is correctly placed on the O.S. map, but, following the incorrect statement in the *New Statistical Account* that it lies on Colpy Farm, certain writers have been misled.

This does not exhaust the list of Biblical and religious place-names of this very limited area. I have mentioned the hill of St Sairs on the south side of the farm of Jericho. The summit of this hill has been for several centuries the site of St Sairs Fair. It has now become little more than a horse market, although it still attracts caravan folk from the environs of London. In spite of the remoteness of the locality it remains one of the largest horse fairs in Scotland. According to local tradition, there is the site of a church in the small plantation on the south side of the market stance. The late farmer of St Sairs, who is now about eighty-three years of age, told me that in his young days the outline of a rectangular building overgrown with grass was plainly visible, and that when his father was rebuilding the farmhouse they dug into the mound in the hope of getting some large building stones, but without success. All trace of this structure has now disappeared, as the site has been encroached upon by a quarry.

MONDAY, 12th March 1917.

The Hon. JOHN ABERCROMBY, LL.D., President,
in the Chair.

A Ballot having been taken, the following were duly elected Fellows:—

His Grace THE DUKE OF ATHOLL, M.V.O., D.S.O., Blair Castle. Blair Atholl.

J. H. MAYNE CAMPBELL, Frimley Park, Surrey.

The following Donations to the Library were intimated, and thanks voted to the Donors:—

(1) By Professor J. W. GREGORY, D.Sc., F.R.S., Glasgow University, the Author.

The Auld Wives' Lifts—A Pseudo-Megalithic Tor. Reprinted from *The Scottish Geographical Magazine*, vol. xxxii., June 1916. Pamphlet.

(2) By JOHN N. ANDERSON, J.P., F.S.A. Scot., the Author.

Spanish Silver at Stornoway. Stornoway, 1911. Pamphlet.

(3) By the Secretary of the HYDERABAD ARCHÆOLOGICAL SOCIETY.

The Journal of the Hyderabad Archæological Society, July 1916. Bombay, 1916.

(4) By T. J. WESTROPP, M.A., 115 Strand Road, Sandymount, Dublin, President of the Royal Society of Antiquaries of Ireland, the Author.

On Certain Typical Earthworks and Ring-Walls in County Limerick. Part II. From *Proceedings of the Royal Irish Academy*, vol. xxxiii., Section C, No. 12.



Fig 1. Gold Ring found at Holyrood.

It was announced that there had been acquired through the King's and Lord Treasurer's Remembrancer a Finger Ring, stirrup-shaped, of solid gold, having a square bezel in which is set a natural octohedral crystal of oriental diamond; the gold setting is bevelled off to the planes of the facets of the crystal; weight, 14.154 grammes; interior diameters, $\frac{3}{4}$ in. by $\frac{11}{16}$ in.; probably

of fourteenth-century date; found in the shrubbery in the south-west angle of the north gardens of the Palace of Holyrood.

The following purchases for the Museum and Library were also announced:—

Purchases for the Museum:—

Objects found on the Links of Stacwick Bay, farm of Skaill, Island of Sanday, Orkney, from a site on which similar objects have previously been found (see *Proc.*, vol. xlvii. p. 9):—Cup of cetacean Bone, $4\frac{3}{8}$ inches in height, $3\frac{7}{8}$ by $3\frac{5}{8}$ inches in diameter at mouth, slightly imperfect at one side of the rim; Peg of Bone, $3\frac{1}{2}$ inches in length, perforated at one end and tapered towards the other; perforated ovoid object of Bone, flattened on both faces, $1\frac{1}{2}$ inch in length by 1 inch in breadth and $\frac{3}{4}$ inch in thickness, imperfect, split longitudinally; two Tines of Deerhorn, showing cutting marks at the thicker ends, $4\frac{3}{4}$ and 5 inches in length; triangular piece of cetacean Bone, measuring 4 inches bisectionally, 3 inches at base, perforated and much decayed.

Books for the Library:—

Edinburgh: A Historical Study, by The Right Hon. Sir Herbert Maxwell, Bart., F.R.S., D.C.L., LL.D., etc. London, 1916. 8vo.

Scottish History Society, second series, vol. xiii. Selections from the Records of the Regality of Melrose and from the Manuscripts of the Earl of Haddington. Edited by Charles S. Romanes, C.A. Vol. iii., 1547–1706. Edinburgh, 1917. 8vo.

Henry Bradshaw Society, vol. li., 1916. The Canterbury Benedictional (British Museum, Harl. MS. 2892). Edited by Reginald Maxwell Woolley, D.D. London, 1917. 8vo.

The following Communication was read:—

I.

TERRA SIGILLATA: SOME TYPICAL DECORATED BOWLS.

BY JAMES CURLE. F.S.A.Scot., F.S.A.

The importance of the scientific study of Terra Sigillata, or Samian ware, which may be said to have begun with the publication of Professor Dragendorff's paper in the *Bonner Jahrbuch* of 1895, has in recent years received wide recognition. Its fruits are to be noted in the reports of excavations on many Roman sites, and in the numerous studies of the pottery preserved in collections throughout Europe; but the literature of sigillata scattered through the publications of Archæological Societies or in museum catalogues is not generally accessible, and it may not be without interest even to those who are familiar with the subject to publish a series of more or less typical examples of decorated sigillata bowls, and to sketch very briefly an outline of this Roman industry, its beginnings in Italy, and the general trend of its development in Western Europe. In England the material for such a series hardly exists, and therefore the examples illustrated are mostly taken from photographs obtained in Germany during the summer of 1913.¹ I am conscious of many gaps, which might have been filled but for the war.

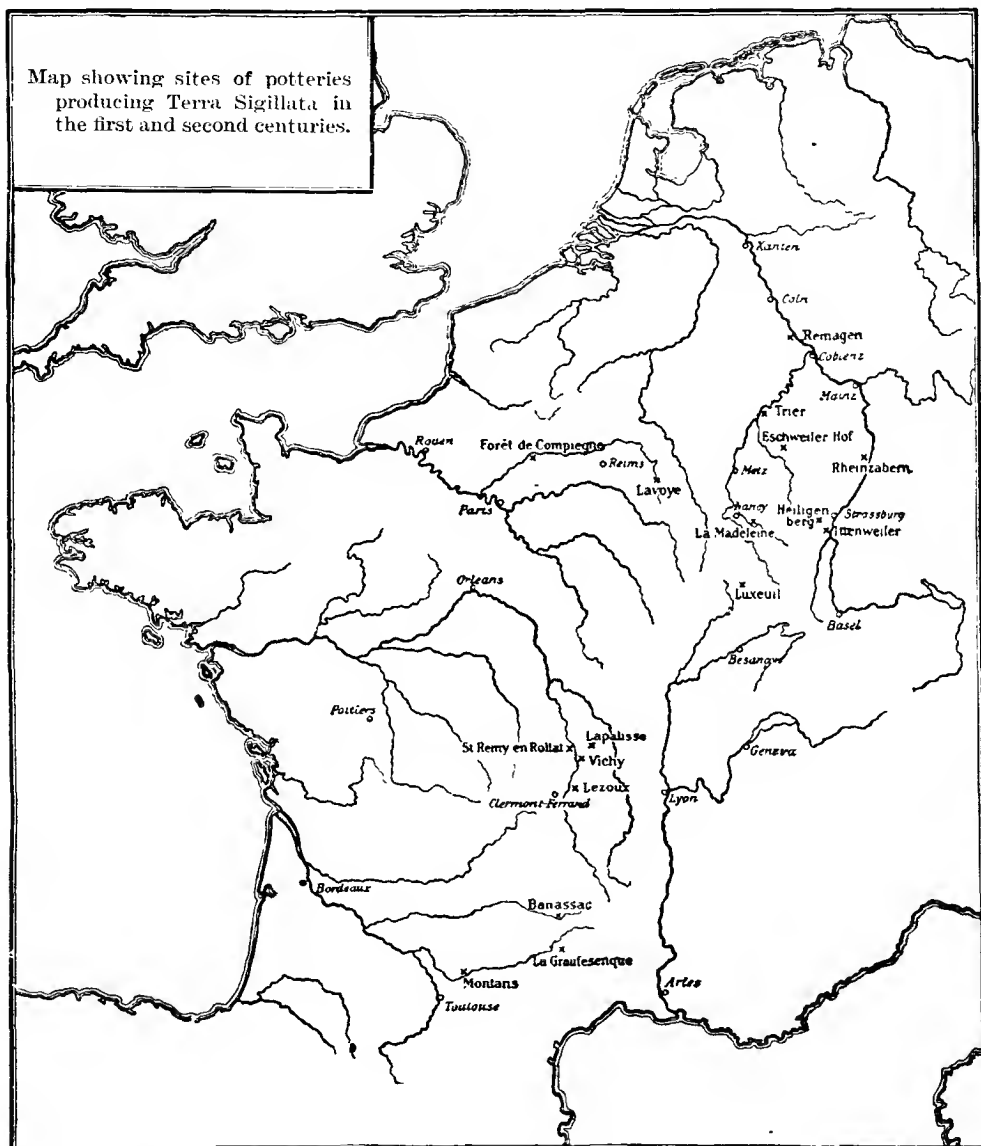
It would take too long to trace the beginnings of Terra Sigillata in Greek lands. It was the potters of Arretium (the modern Arezzo) in Central Italy, and of Puteoli on the shores of the Bay of Naples, in whose hands it attained its highest perfection, and from whom the knowledge of its shapes, the method of its decoration, and its bright red glaze was transmitted to the potters of Gaul and of Germany.

In Arezzo the local potteries must have begun their output as early as the second century B.C., but in the earliest burials in the cemeteries there the vases are black, and the transition to the red Arretine ware appears to have taken place towards the end of that century. The most flourishing period of the potteries was in the hundred years between 40 B.C. and 60 A.D. The fame of their products in the Roman world still lingers in the verses of the Latin poets. Centuries later, in the height of the Renaissance, the discovery of Arretine vases in an ancient kiln procured for the family of Vasari the favour of Lorenzo de' Medici.

The products of the kilns were of three kinds: first, plain dishes, cups, platters, bowls, thrown on the wheel, glazed, and fired; second, pottery decorated with applied reliefs; and, lastly, vessels formed and

¹ The map upon the opposite page, which shows the position of most of the Roman potteries referred to in the text, has been borrowed from Fräulein Fölzer's *Die Bilderschüsseln der ostgotischen-Manufakturen*, Bonn, 1913.

decorated by means of moulds. It is solely with the latter that we have to deal.



Of these, the krater or chalice form was the most common. A hollow bowl-shaped mould was made of clay suitable to the dimensions of the vase. On the interior of this mould the design, which was to appear in

relief on the finished piece, was impressed by means of small stamps carefully modelled, probably with the aid of the "cire perdue" process, bearing representations of figures, leaves, masks, or tendrils. The mould was then baked hard in the kiln. Into this mould the clay was pressed, and, shrinking as it dried, was withdrawn. A separately modelled foot, sometimes also handles, were added, and the whole was glazed and fired. Among the decoration on the exterior of the vessel there is usually to be seen the name of the potter, and not infrequently also that of his slave or workman: thus we find the name of P. Cornelius and his slave Potus; M. Perennius—Tigranes; Cn. Ateius—Hilarus. In many cases the names



Fig. 1. Cast from Arretine Mould by Perennius.

of the workmen betray a Greek or an Asiatic origin—Nicephorus, Pilades, Xanthus belong to the first class, while Tigranes and Bargates probably came from the East.

The designs employed show great variety. Processions of figures representing the seasons, the Muses, dancing Mænads, Satyrs among the vines, Bacchus and Ariadne; combats of Centaurs and Lapithæ; hunting scenes, banqueting scenes; cupids; masks, wreaths, and garlands. The work of the potters of the best period—such as Perennius or Tigranes—is characterised by great delicacy of execution. The figures are well modelled, the whole ornamentation stands out sharp and clear.

The three illustrations of Arretine ware (figs. 1, 2, and 3) are all from casts taken from original moulds preserved in the British Museum. Fig. 1 is from a bowl by the potter M. Perennius,¹ and represents a scene in which Alexander the Great is seen on horseback charging a lion in

¹ Walters, *Catalogue of the Roman Pottery in the British Museum*, p. 31, fig. 25.

the act of seizing a fallen man, while Krateros advances to the attack



Fig. 2. Cast from Arretine Mould by Perennius.

brandishing a battle-axe. On the side of the bowl is the potter's stamp. The delicate modelling of the figures and of the beaded border and wreath surrounding the margin is to be noted. Fig. 2 represents a banquet scene,¹ with figures of a young man and woman reclining on cushions. The stamps of Perennius and of his potter Tigranes appear on the side of the bowl. Especially remarkable is the vine wreath with bunches of grapes, which forms a background. On fig. 3 is a dancing Mænad, also from the workshop of Perennius.² She stands, a charming figure, poised on tiptoe, clad in loose floating draperies, her head thrown back, her thyrsos in her right hand.

The Arretine potters found their market all over Italy. They exported their wares along the Mediterranean coast to Spain, to Northern Africa, and passing through Massilia to the cities of Southern Gaul. In Germany, the Danubian lands, and in Britain, except on a few purely military sites, there is little trace of their commerce.



Fig. 3. Cast from an Arretine Mould.

¹ Walters, *Catalogue of Roman Pottery*, p. 34, L. 109.

² *Ibid.*, p. 29, L. 95.

A recent find from one of these military sites (the fort of Haltern in Westphalia) is of great importance for the dating of Arretine ware, because the occupation of the region in which Haltern was situated was a very short one.

In the early years of Augustus' reign [B.C. 27-A.D. 14] the definite northern frontier of the empire was the Rhine. His troops were stationed at *Castra Vetera* near the modern Xanten, at *Mogontiacum* (Mainz), and possibly also at *Vindonissa*, the modern Windisch; still the desire for further expansion was unsatisfied, and Drusus, who in B.C. 13 took over the administration of Gaul, in the following year led his troops across the Rhine and advanced to the Elbe. The attempt to hold permanently the land between these two rivers was brought to an end in A.D. 9 by the great disaster to Varus and his three legions in the *Teutoburger Wald*. From Xanten, which was the headquarters of the troops on the Lower Rhine, the main line of advance into Northern Germany was the valley of the Lippe, and on the line of the military road which followed the valley the fort of Haltern was constructed. The period of its occupation must be dated within the twenty years which lie between the expedition of Drusus and the defeat of Varus. The excavation of the fort has thrown much light on the study of Roman pottery. It has shown that already in the Augustan epoch the coarser vessels employed by the army were being manufactured on the Rhine—probably at Xanten; but the finer ware had been brought from Italy, and most of it bears the stamps of Arretine potters. Among these the name of Cn. Ateius is of frequent occurrence. The exact locality of his pottery appears to be still in doubt, but there also occur at Haltern the stamps of M. Perennius and P. Cornelius, both of whom must have worked in Arezzo.

The Haltern vessels are chiefly undecorated, but the excavations of 1909 produced a remarkable find of more or less perfect decorated vessels. Fig. 4, which belongs to this group, is a cup raised upon a foot-stand. The rim is formed by a distinct moulding on which may be noted parallel roulette lines. Defining the upper margin of the decorative zone is an ovolo border, a feature which continues throughout the whole *sigillata* period. In the decorative frieze are groups of girls playing a game with four knucklebones. In each group the girls are seated on low stools facing each other, while between them stands a low table supported on legs terminating in claws; the knucklebones lie on the table. Beneath the figures is a wavy line in relief, and beneath it a band of palmettes. The vessel has no maker's stamp, but it is probably from the pottery of Ateius.¹ The second example from the Haltern series

¹ Hahnle, "Ausgrabungen bei Haltern: Die Reliefkelche," *Mitteilungen der Altertums-Kommission für Westfalen*, Heft vi. p. 80.

which I have illustrated (fig. 5) is also of the chalice type, though the foot is wanting. The rim overhangs, and is altogether more strongly defined than in fig. 4,¹ but it also shows the ovolo border, and in the graceful ivy wreath which surrounds the side it exhibits the naturalistic treatment of plant forms so characteristic of Augustan art. There is no maker's stamp. We realise as we look at these Haltern vessels how much the art of the Arretine potters owed to the silversmith, and how largely their work was based on metal technique. In their decorated



Fig. 4. Arretine Cup from Haltern.

vessels the potters really produced a cheap substitute for the costly silver cups so much prized in the Roman world.

In the Augustan period, just as in our own time, there were collectors of beautiful things — bronzes, marbles, plate: and among the more perishable objects preserved to us which must have formed part of such collections are one or two hoards of silver vessels, in which we recognise that there are pieces which belong to different periods and have passed through the hands of several owners. There is the treasure, consisting of no less than seventy pieces, which was found carefully concealed on

¹ Hahnle, "Ausgrabungen bei Haltern," p. 70.

the Galgenburg near Hildesheim. How it found its way into Central Germany is an unsolved problem. There is the treasure of one hundred and six pieces found in the ruins of the villa of Boscoreale, which stood upon the slopes of Vesuvius, and which with its owner was no doubt overwhelmed in the eruption which destroyed Pompeii. There is the treasure of sixty-nine pieces found in France at Berthouville near Bernay, on the site of a Gaulish shrine. The vessels are of many forms, and exhibit a great variety of decoration. Many of them were the work of Greek craftsmen. The designs are usually executed in high relief, and we find among them a variety of figure subjects, and many examples



Fig. 5. Arretine Cup from Haltern.

of those wreaths and garlands which, as we know from the sculptures of the Ara Pacis and other monuments, were popular features of Augustan decoration.

Side by side with this Arretine krater from the fort of Haltern it is interesting to place a silver drinking-cup, a scyphus, from the villa of Boscoreale (fig. 6). In the one, the wreath which covers the side is of ivy; in the other, it is of olive leaves, branches, and fruit. The silver-smith's relief is higher, and his work is more elaborate than that of the potter, but the scheme of design is common to both. There are many of these cups which might be illustrated to show the potter's indebtedness to the metal-worker. There is the cantharus from Boscoreale, decorated with a beautiful design of plane leaves, a subject which, much more clumsily executed, was a favourite with the later Gaulish potters. There

is the cup from the Hildesheim find, with its garland of myrtle; or the cup from Alise Sainte Reine, the ancient Alesia, which has been described as showing the naturalistic ornament of the first century B.C. at its best, in



Fig. 6. Silver Cup from Boscoreale.

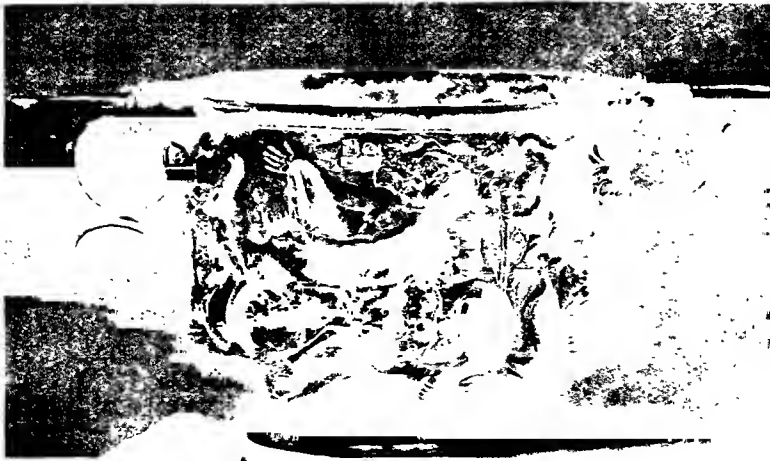


Fig. 7. Silver Cup from Berthouville, near Bernay.

which again we see the clustering myrtle leaves and fruit. But a single example must suffice to show the treatment of a figure subject. Fig. 7 represents a scyphus from the Bernay treasure. The principal figure in the design is a female Centaur seated on the ground. Her right hand is

raised, her left holds a mirror. Her head, with floating hair wreathed with ivy, is turned back to the right; behind her is a basket of fruit, and a Cupid grasping the tall flower-stem of a poppy. Beneath the mirror is the *cista mystica* with the snake, and to the left a mask and an overthrown krater, on which stands a cupid blowing a double flute, while from the mouth of the overturned vessel springs a panther.¹

But to return to the Arretine ware: the examples of it along the Rhine are not numerous, they occur on such early occupied sites as Strassburg,



Fig. 8. Arretine Cup from Mainz.

Mainz, Xanten, and Neuss. Two such pieces are specially interesting in the study of sigillata. Both bear the stamp of Ateius, so that in point of time they do not differ materially from the Haltern examples. The best-preserved of these, a cup found in Mainz (fig. 8), is distinguished by a rather heavy overhanging rim.² Beneath it there is an ornamental band, of which the chief feature is a line of rosettes, and below it the usual decorative frieze, in which cranes stand grouped among tall flowering water-plants; a border of palmettes alternating with rosettes forms the lower margin of the frieze. In this design we again trace the debt of

¹ Schreiber, *Die alexandrinische Toreutik*, p. 334.

² Behn, *Römische Keramik*, p. 145, and Taf. iii.

the potters to the metal-workers: it belongs to the class of decoration which in its origin has frequently been attributed to the work of Alexandrian silversmiths.

In the second cup, which is from Xanten (fig. 9), we note that the side has been divided into two parallel bands of ornament, and that in the upper part of the field there is a graceful acanthus scroll, of a type which later became very common on the work of the Gaulish potters. On the front of the cup is the stamp of the maker, Xanthus, the slave of Ateius,



Fig. 9. Arretine Cup by Xanthus, from Xanten.

supported by small winged figures. A somewhat similar frieze is to be seen on a cup, also from the workshop of Ateius, in the Central Museum at Mainz, in which birds, bees, and grasshoppers find a place in the windings of the acanthus leaves.¹

In the first century B.C. the products of Italian potters had to a considerable extent penetrated into Southern Gaul, and doubtless this commerce increased as the province came more fully under Roman rule. By the close of the Augustan age the country along both banks of the Lower Rhone was completely Romanised in language and manners. It is therefore not surprising that early in the first century A.D. there were Gaulish potteries producing a considerable variety of types of

¹ Behm, *op. cit.*, p. 147, Taf. iii.

vessels based on Italian models. The pottery of Saint Remy en Rollat, near the modern Vichy, which belongs to the early part of the first century, produced a whole series of vessels based on Italian forms; but, unlike their better-known Gaulish competitors, the potters of St Remy do not appear to have employed a red colour or glaze—their products are usually of a yellow, greenish-yellow, or brownish shade. Although its output was probably not very large, traces of its wares are met with over a fairly wide area.

As far as we know, the potteries which at this early period attained the greatest perfection and the widest distribution were South Gaulish—such as La Graufesenque, Montans, and Banassac, all of which are situated on tributaries of the Garonne. By them the traditions of the potters of Arezzo were transplanted into Gaulish soil; they reproduced on their wares the same red Arretine colour, but they attained to a perfection of glaze which we do not find in their prototypes. There is no allusion in ancient literature to the products of La Graufesenque. The celebrity of Arretine vases has been kept alive in the pages of Pliny and the *Epigrams* of Martial, but the remains of the town in the ancient Condatomagus, which we now know as La Graufesenque, have almost entirely disappeared, and our knowledge that it once held a great and flourishing industry is due entirely to archaeological investigations, first undertaken by the Abbé Cérés of Rodez. The Abbé Cérés, digging on the site in 1882, discovered a mass of potters' debris, remains of moulds and of broken dishes. The explorations which he began have been continued by others, and from the archaeological material thus gathered together—the moulds and the fragments of vessels bearing potters' stamps—it has been possible to trace the widespread commerce of this ancient town, and to identify the output of its kilns in many distant parts of the empire.

We do not know at what date the South Gaulish potteries began their operations. Their wares had not displaced the Arretine bowls at Bibracte, the modern Mont Beuvray, which was abandoned in the reign of Augustus, nor have they been found at Haltern. But it is clear that before the end of the reign of Tiberius they had reached the Rhine and the upper waters of the Danube.

The potters produced and exported a varied series of plain undecorated vessels, cups, bowls, and platters, the shapes in most cases copied from Italian models; but there was also a number of vessels decorated in relief, produced from moulds by the same process which was employed by the potters of Arezzo. The commoner shapes of these were of the chalice or krater form; the carinated bowl, usually distinguished by the number 29 given to it in the classification of Dragendorff; the cylindrical bowl,

No. 30, of the same classification; and the hemispherical bowl, No. 37. The first of these types did not remain long in vogue. The most popular form was the carinated bowl; next to it comes the cylindrical shape; and lastly we have the ordinary hemispherical form, which came into fashion towards the end of the first century, and remained the standard shape in all the many potteries which at a later date handed on the tradition of La Graufesenque. Upon their bowls the potters stamped their names, following the Italian fashion. In the early types the stamp usually occurs on the interior, though sometimes the name, as at Arretium, appears in relief on the external surface of the bowl among the decoration. These stamps of the makers, associated with the ornament among which we find them, often enable us to recognise the style of the individual potters, and to analyse their stock-in-trade of punches with which they worked out their designs. The South Gaulish potters never approached their predecessors of Arezzo in their treatment of human forms. On the carinated bowls which form the great majority of their products the designs consist of scrolls, arabesques, garlands associated with small birds or animals, and occasionally, but more rarely, of human figures. The style of ornamentation employed on these bowls arose from their shape, in which the surface is naturally divided into parallel zones. The human figures were more common on bowls of the cylindrical type which afforded a field more suitable for such decoration.

The chronology of the potteries of La Graufesenque and neighbouring seats of the industry, and indeed also of those which flourished further north, has been worked out from the occurrence of their products on sites which can be dated through finds of coins or inscriptions, or from historical sources. As we have already seen, Haltern offers us one of these fixed points of great importance, and indeed nowhere is it possible to follow more clearly the evolution of provincial Roman pottery than upon the sites of the forts which were constructed as the frontier of the empire was thrust forward into the German lands which lay beyond the Danube and the Rhine.

After the Varus disaster of A.D. 9, the Roman forces were withdrawn almost entirely to the left bank of the Rhine, and we find them holding the great legionary fortresses at Windisch, Strassburg, Mainz, Cologne, Neuss, and Xanten, joined together by a chain of fifty smaller castella which had been established by Drusus. In the time of Tiberius only a small portion of the right bank was held, notably the portion opposite Mainz, including Kastel and Wiesbaden, and from a comparatively early date the fort of Hofheim. Further east, the Danube formed the frontier.

From Claudius to the death of Trajan, A.D. 37 to 117, lay the period of

expansion and the gradual advance into the country forming the re-entering angle between the Rhine and the Danube. The Roman operations which began with Vespasian were in a large measure undertaken with a view to shortening the line of the frontier, involving a more or less artificial boundary in place of the rivers. Vespasian in A.D. 74 constructed a great military road running from Strassburg through the Kinzigthal to Rottweil, and thence to Tüttlingen on the Danube, Domitian's roads formed a connecting link between Mainz, the Roman headquarters, and the Danube. With Domitian too came the occupation of the Wetterau, the fertile plain to the north of the Main, on the edge of which Frankfurt stands, and the establishment of the inner line of Limes forts. Finally, under Pius, the advanced line of forts, known as the Outer Limes, was built, which was held more or less firmly till the reign of Gallienus, when the inrush of the Allemanni brought about the evacuation of the frontier posts, and finally drove the whole of the Roman troops behind the Rhine.

It is easy to see how the concentration of so many troops, legionary and auxiliary, on the Rhine created a market for the potters' wares, and how the various stages of progression, as the frontier lines were pushed outward, furnish us with the debris of pottery brought from many sources and belonging to different periods. To the frontier fortresses like Xanten, Neuss, or Mainz must have come the earliest exports of the Gaulish potters; among these we may class fig. 10, a krater found at Neuss, and preserved in the museum there, dating from about the reign of Tiberius [A.D. 14-37]. It has no maker's stamp, but from its style it may be regarded as of South Gaulish origin. The shape is still that of the Arretine vessels, but its decoration is much simpler than that of the cups from Haltern. There is no attempt at figures: we have merely a leafy scroll, light and graceful in its treatment; along its upper margin runs a line of egg-and-tassel moulding, while beneath it is a band of panels defined by dotted lines. The krater type, as we have seen, soon fell out of use. The carinated bowl which replaced it was in a large measure a modification of the earlier form. We have noted how the decoration of the krater type was frequently arranged in horizontal bands, especially in those examples in which arabesques or garlands had taken the place of figure subjects; and this feature is reproduced in the early bowls.

Two of these are illustrated here. The first (fig. 11) is a bowl found at Weisenau, and now in the museum of Mainz, dating from the reign of Tiberius. It bears the stamp SCOTTIVS, a potter of La Graufesenque. On the side are two zones of ornament, separated from each other by a slightly raised moulding flanked by lines of dots. The whole treatment

shows its indebtedness to the work of the silversmith. The wreath which surrounds the upper portion of the bowl at once recalls the myrtle foliage



Fig. 10. Cup, probably South Gaulish, from Neuss.



Fig. 11. South Gaulish Bowl by Scottius, from Weisenau.

of the well-known cup from Alesia. The raised godroons of the lower half are no less certainly derived from embossed metal. This treatment

is well illustrated on a silver bowl from Pompeii, preserved in the museum at Naples.

The second bowl, dating from the same period (fig. 12), was found at Mainz, and is now in the Marx Collection there. It bears the stamp of the potter Bilicatus, OFFIC. BILICAT., also from Graufesenque. Around the upper margin are parallel lines of rouletting, and beneath them a graceful scroll enclosed between bands of dotted lines, while the lower portion of the side is covered with a pattern derived from embossed metal, resembling that upon the last example. In the scroll we have a piece of decoration very characteristic of the bowls of this period. We find it,

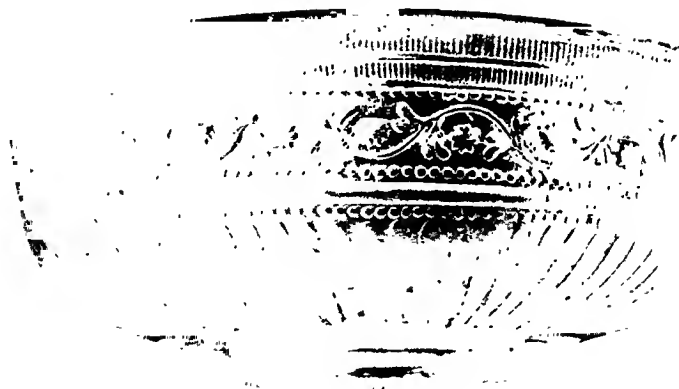


Fig. 12. South Gaulish Bowl by Bilicatus, from Mainz.

for example, on the fragments from Aislingen,¹ an early fort in the region of the Upper Danube, of which the earliest occupation dates from Tiberius, and also on those from the earliest strata at Wiesbaden.² Probably the decoration of the bowl originated with some Arretine model. In a fragment from Haltern illustrated by Herr Hähnle,³ which bears the stamp BARGATES, we have not only the same imitation of embossed metal, but also a scroll which has much in common with this design. An example of this type of bowl occurs among some Roman objects found at Plesheybury,⁴ in Essex, now in the museum at

¹ Knorr, *Die Terra-sigillata-Gefässe von Aislingen*, Taf. i. fig. 3.

² Ritterling und Pallat, *Römische Funde aus Wiesbaden*, Taf. iv. fig. 6.

³ Hähnle, *op. cit.*, p. 79, fig. 8.

⁴ May, "On some Early Roman Finds from Plesheybury, Essex," *Transactions of the Essex Archaeological Society*, vol. xiv. part iv.

Chelmsford. The site has also furnished a fragment bearing the stamp of Ateius. These finds are of special interest as indications of the export of Roman products to England before the Claudian Conquest.

The bowls just described (figs. 11 and 12) were probably made in the third or possibly in the beginning of the fourth decade of the first century, and represent the earliest form of the bowl type 29. But it is perhaps just a little later in the reigns of Caligula and Claudius that the South Gaulish potters attained to their highest skill in decorative treatment. Fig. 13, which may perhaps be dated as early as the reign



Fig. 13. South Gaulish Bowl from Mainz.

of Caligula [A.D. 37-41], comes from Mainz; it shows a very graceful scroll with ivy leaves; but in the lower zone we have a somewhat conventional wreath combined with leaves and tendrils which forms a framework to small medallions, each containing a figure of an eagle with outstretched wings, and in the spaces alternating with the medallions a couple of leaves and a small bird. The rouletting of the moulding which separates the two decorative zones is an indication of early date. This does not occur on the bowls found at Hofheim. The bowl has no maker's stamp, but it is not improbable that it is from the workshop of Gallicanus, a potter of La Graufesenque. A fragment of a bowl found in Rome bearing his name, figured by Professor Knorr,¹ has much in common with it.

Fig. 14, probably dating from the reign of Claudius [A.D. 41-54], was

¹ Knorr, *Aislingen*, Taf. v. fig. 1.

found at Wiesbaden in 1907, and is now in the museum there. It has the stamp of the potter Balbus. The shape still very closely resembles that of the two last examples. The rim is comparatively narrow, and only slightly everted. The scroll in the upper zone, with its double leaves, is less conventional than that of fig. 12, but what is chiefly noticeable about it is the decorative skill shown in the treatment of the winding sprays of leaf and tendril which fill the lower zone on the side. The same style may be seen at Aislingen,¹ where a similar conventional treatment of ivy or convolvulus is admirably reproduced on a bowl by Senecio.



Fig. 14. South Gaulish Bowl by Balbus, from Wiesbaden.

Fig. 15, a bowl of cylindrical form (Dragendorff, 30), was found at Xanten, and is now in the Berlin Antiquarium. In its decoration it recalls fig. 13. We have the same conventional wreath framing medallions, each containing a figure of Mercury. In these we note the beginnings of figure subjects on the South Gaulish bowls; and, again, we have the intervening spaces filled with winding stems and leaves and figures of birds. It is a style which was apparently introduced by the potters working under Caligula and Claudius; and we find it on the bowls of Masclus, who belongs to that period, and whose products are very widely spread. A very similar arrangement of wreath and leaves, accompanied by figures of small birds and animals, occurs on one of his bowls found in Vienna,² and on a fragment of a bowl, probably from

¹ Knorr, *Aislingen*, Taf. iv. fig. 1, and Taf. vi. figs. 1 and 2.

² *Ibid.*, p. 6, fig. 2.

the same mould, found in London,¹ now in the British Museum. Examples of the work of this potter have been met with on the Rhine and the Danube, in Provence, in Spain, and throughout France. Probably his wares came to England among the finer dishes which began to be imported after the Claudian Conquest under Aulus Plautius in A.D. 43. The type of decoration to be seen upon the bowls of Masclous, and which he probably originated, appears to have had many imitators, and we can trace its vogue over a long period.

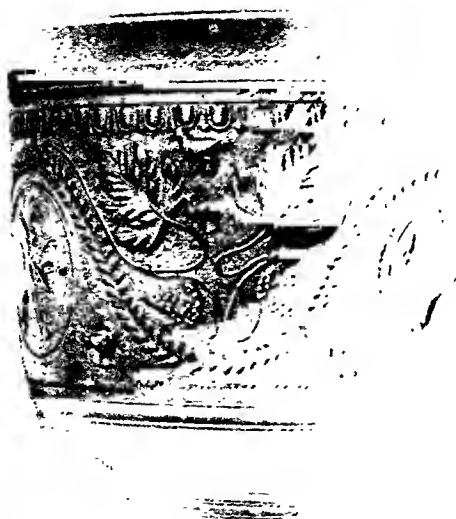


Fig. 15. South Gaulish Bowl from Xanten.

In fig. 16 we have yet another example of a Claudian bowl. It was found in Wiesbaden, and bears the stamp OF AQVITANI. It will be noted how the narrow, almost vertical, rim in such early bowls as figs. 11 and 12 has given place to a wider and more everted pattern with strongly marked rouletting, a feature characteristic of most of the bowls of type 29, produced in the second half of the first century. The scroll ornament which fills the upper zone is much more conventional than those we have just examined. It is a design which must have continued in use for a considerable period. It is to be seen, for example, on a bowl of Vitalis found in Pompeii.² Indeed, there is little to distinguish this specimen

¹ Walters, *Catalogue of Roman Pottery*, p. 114, fig. 114.

² Atkinson, "A Hoard of Samian Ware from Pompeii," *Journal of Roman Studies*, vol. iv., plate v. fig. 21.

from the bowls of the Flavian period, except the volute ornamentation recalling the uncoiled frond of a fern, which covers the lower zone. In this we have a feature—probably a metal derivative—which can be traced back to the potters of Arezzo and Puteoli,¹ and which by the reign of Nero had probably disappeared.

Hitherto we have been dealing with the South Gaulish pottery, but towards the end of the first century there came into the field, in the pottery of Lezoux, a new competitor, which appears to have entirely driven the wares of La Graufesenque out of the field. As in the case of



Fig. 16. South Gaulish Bowl by Aquitanus, from Wiesbaden.

the potteries of Southern Gaul, our knowledge of Lezoux comes from archæological investigation. The site lies in Central France, at no great distance from the modern Clermont Ferrand. The potteries were situated near the Allier, by which their products could easily reach the Loire and so gain the western coast of Gaul. The presence of fragments of sigillata at Lezoux and the surrounding country had long been noted, but it was only in 1879 that an investigation of the remains was undertaken by Dr Plicque, a medical practitioner in the district. Dr Plicque continued his researches for some fifteen years, and unearthed an immense collection of pottery, including the names of over 3000 Lezoux potters upon some 15,000 stamped pieces, and over sixty potters' kilns. After his death this

¹ Knorr, *Aislingen*, Taf. i. figs. 8 and 10.

great mass of material was acquired by the Museum of St Germain-en-Laye, and has been analysed and illustrated in the publication of M. Déchelette—*Les vases céramiques ornés de la Gaule romaine*. I do not propose to attempt the illustration of any long series of the bowls of Lezoux, because in the early stages of the existence of these potteries the export appears to have been limited, and their products are not generally met with far afield. I have, however, reproduced in fig. 17 a number of early fragments from photographs of pieces in the Plicque Collection, for which I am indebted to Mr Donald Atkinson. These belong to the first period of Lezoux, which Déchelette places between about A.D. 40 and A.D. 75. All of these are portions of bowls of type 29, and they illustrate the admirable designs and the finish attained by the early Lezoux potters, whose names, such as Atepomarus, Cobnertus, Danomarus, indicate their Gaulish origin. In such pieces the red glaze of La Graufesenque is replaced by a bright orange colour, with a less lustrous surface. In the simplicity of their treatment they correspond in some measure with the South Gaulish products of the early first century, of which we have an example in the bowl by Scottius (fig. 11), but the designs have characteristics of their own which indicate an inspiration drawn from Arezzo or some other Italian source. No. 6 is part of a bowl by Atepomarus. The wreath is probably inspired by an Arretine model. The rosettes in No. 5 doubtless came from the same source. The scroll on No. 8 belongs, as we have already noted, to a type which the South Gaulish potters appear to have borrowed from Arezzo: it cannot be claimed as specially characteristic of Lezoux. The same remark applies to No. 9, which recalls the decoration of the bowl by Balbus (fig. 13), and is clearly Claudian in character.

The products of the South Gaulish potters during the reign of Vespasian [A.D. 69-79] are well illustrated from the finds at Pompeii, where the import must have come to an end with the destruction of the city in A.D. 79. The material from this source has been made much more accessible to us by Mr Atkinson's recent publication, giving detailed particulars of a single hoard of no less than ninety bowls found together in a Pompeian house, which he has reason to believe were produced within a very short space of time before the great catastrophe. In this hoard a large proportion of the bowls belong to the hemispherical shape, type 37, then just coming into vogue, and which towards the end of the century finally superseded the carinated type. On the great majority of these early hemispherical bowls the decoration is in transition style, the surface being still arranged in parallel zones, just as we find it on the bowls of the carinated type; but in it we note a growing tendency to replace the winding scrolls and floral designs of the Claudian potters by an arrange-

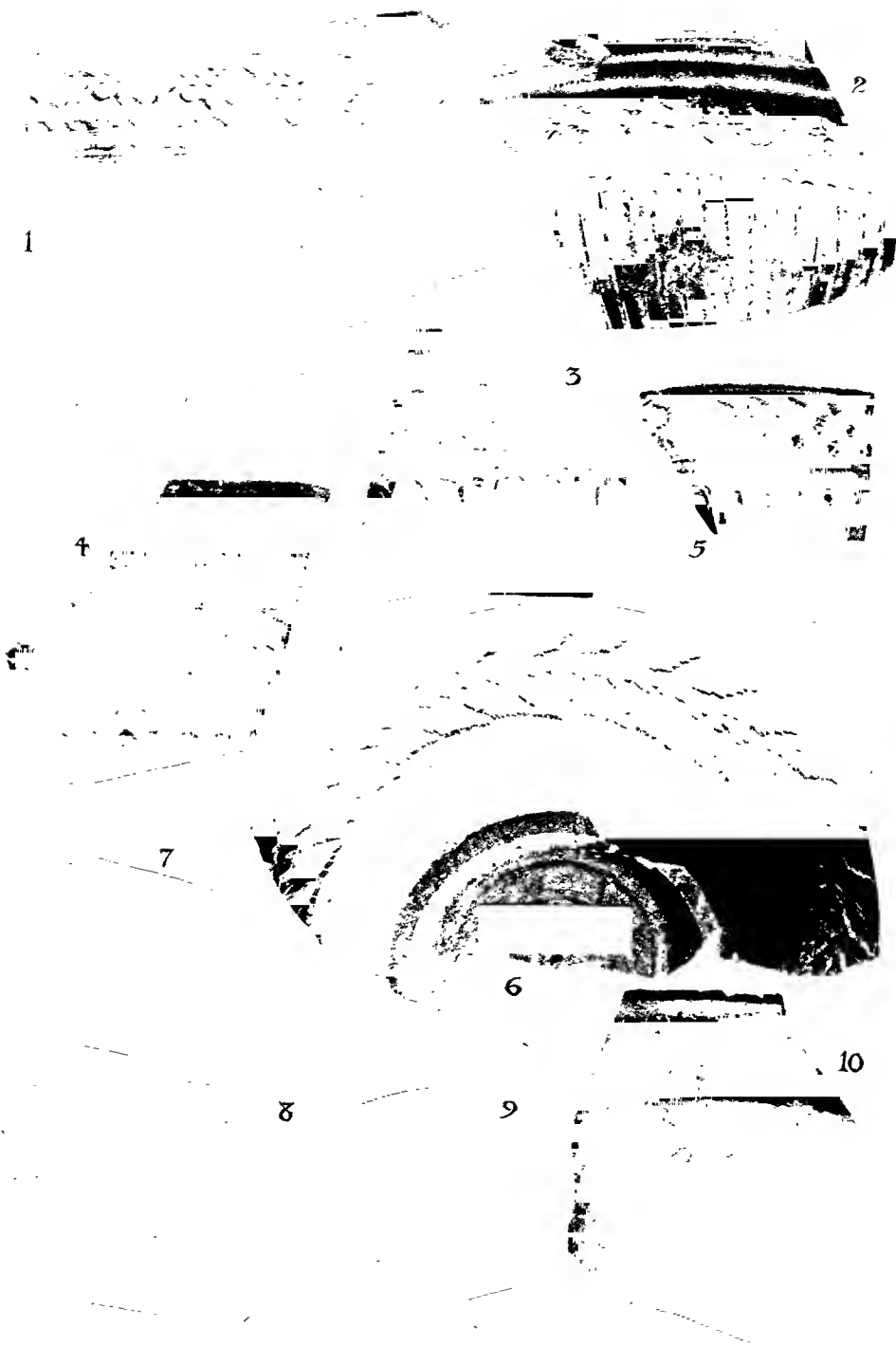


Fig. 17. Fragments of Lezoux Bowls from the Plicque Collection.

ment of the surface in panels, the so-called metope decoration, and the introduction of birds and animals, and, more rarely, of human forms. Of the eighty-one bowls illustrated by Mr Atkinson, a little more than a fourth have only wreath decoration. In a half of the number we find birds and animals introduced as an element in the design. Comparing these with the designs upon fragments of Claudian bowls from Aislingen, Strassburg, and Vindonissa, published by Professor Knorr, we find that upon them the proportion of scrolls or foliage patterns without animal forms is much larger.

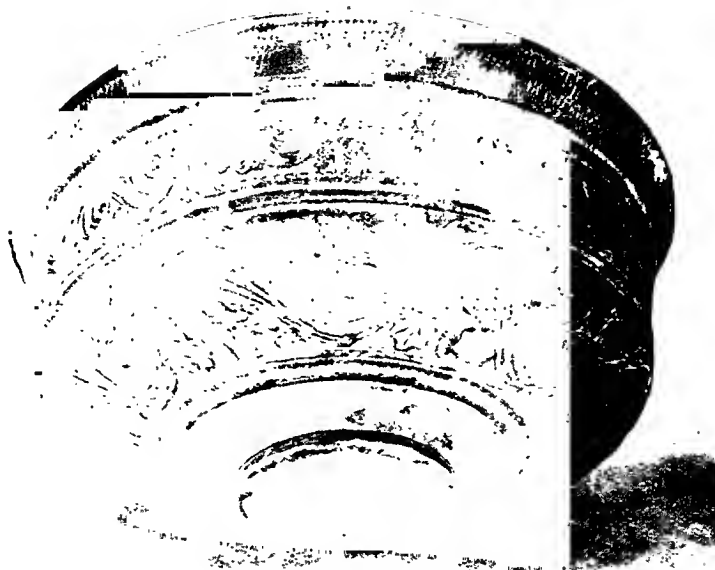


Fig. 18. South Gaulish Bowl from Pompeii.

I am enabled to illustrate a South Gaulish bowl, found at Pompeii, from a photograph by Mr Atkinson (fig. 18). It has the usual everted rim covered with rouletting, and the decoration in two zones. In the lower of these there is a design of leaf and tendril, purely conventional in treatment, but admirably spaced and executed, and in the upper zone another more or less conventional scroll; but, unlike the earlier examples illustrated, the scroll is interrupted by a rectangular panel filled with a decoration composed of parallel lines of arrow points, very characteristic of the Flavian period. The bowl is without a stamp.

As a second example of the same period we have a bowl found at Torre Annunciata, and now in the British Museum (fig. 19), which was

probably buried in the great eruption. It is somewhat coarse and a good deal repaired, but it illustrates the division of the upper zone into panels, with pyramids of arrow points and small semi-medallions filled with representations of animals—the beginning of the metope style so common in the Domitian period. In the lower zone the leaves and tendrils recall those of fig. 18, but at intervals we note an arrangement of leaves tied together, from the middle of which spring twining stalks ending in long buds; this, on the hemispherical bowls, grows into a very common ornament, in its general outline recalling the St Andrew's Cross.

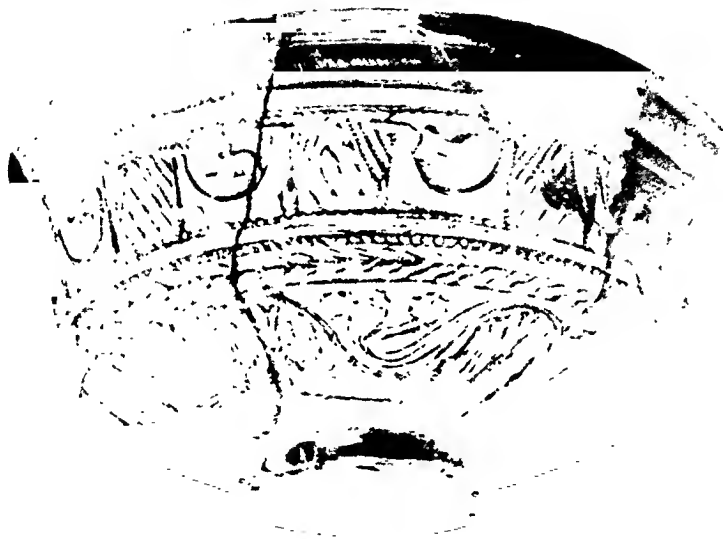


Fig. 19. South Gaulish Bowl from Torre Annunziata.

The earliest example of the hemispherical bowl which I have reproduced comes from the Plicque Collection (fig. 20). It appears from the style to belong to the reign of Vespasian, and is interesting as illustrating the Lezoux output of that date. No doubt in the arrangement of wreaths the influence of the designs of Maschus and his school, as in fig. 15, is apparent; while in the wreath which replaces the common band of egg-and-tassel moulding round the upper margin of the design there is a clear tradition from such earlier work as is illustrated in fig. 17. The cruciform ornament indicated in the last example is here fully developed, the upper stems ending in poppy-heads.

The finds from the fort of Newstead furnish us with examples of the

pottery of Domitian's reign [A.D. 81-95]. The fragments found there indicate that the bowls of type 29 had not disappeared, but the hemispherical bowls (type 37) are more in evidence. These continue to exhibit the transition style, of which we have an example in fig. 23, and with it also the division of the surface of the bowl into panels, the metope decoration, which had begun to show itself on some of the Pompeian finds.

In fig. 21, from one of the Newstead rubbish pits, the space between the decorated zone and the lip is comparatively narrow. There is the egg-



Fig. 20. Lezoux Bowl, Plieque Collection.

and-tassel moulding: the so-called cruciform design is repeated on four panels. In the centre is a figure of a boar, beneath it a fowler throwing a net over a small bird; on the left a figure of Victory, and on the right Diana bearing a hind. Fig. 22, from the ditch of the early fort at Newstead, is of type 30. The foot is restored. The surface is divided by arches, between each a zigzag stem, floreated at the top. The panels are filled alternately with an eagle standing above a hare, and a female figure. To represent the dead hare, the ordinary stamp for the couchant animal has simply been turned upside down: beneath the hare are rows of arrow points. Déchelette notes that the figure of the woman with her chin leaning on her right hand; her left hand supporting the right elbow



Fig. 21. South Gaulish Bowl from Newstead.



Fig. 22. South Gaulish Bowl from Newstead.

is exactly the attitude of a figure of Penelope on a fresco from Pompeii. The same figure occurs on bowls by the potter Masclus,¹ also on a bowl of type 30 of the Claudian period found at Ristissen,² which lies near the Upper Danube, and on a beaker of Dragendorff's type 67, at Gunzburg, which Professor Knorr assigns to the reign of Nero.³

Fig. 23 probably also belongs to the reign of Domitian. It was found at Colchester, and now forms part of the collection in the Castle Museum there. In it the arrangement of the design in two zones is the result of

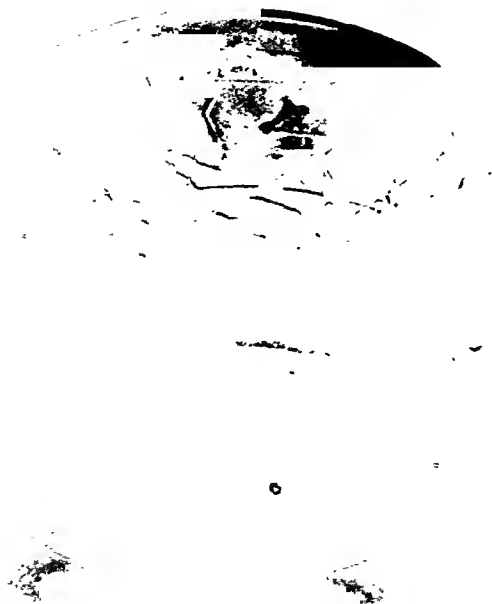


Fig. 23. Bowl, probably South Gaulish, from Colchester.

the tradition from the earlier carinated bowls. In the upper zone a bestiarius (Déchelette, type 634) stands with his spear at rest ready to meet the attack of the boar which comes charging towards him, with a hound at its heels. There is a distinct sense of motion in the groups of flying hounds which fill the lower zone. The conventional trees which serve to divide the groups are to be seen on a bowl from Rottweil. The bowl has no potter's stamp: it is probably South Gaulish.

¹ Déchelette, *Les vases céramiques ornés de la Gaule romaine*, vol. ii. p. 89, fig. 530. *Ibid.*, vol. i. p. 285.

² Knorr, "Die neugefundenen Sigillata von Ristissen," *Festschrift der K. Altertumsammlung in Stuttgart*, 1912, Taf. ii. fig. 1.

³ Knorr, "Vorflavische Sigillata von Gunzburg," *Römisch-germanisches Korrespondenzblatt*, 1913, p. 73.

In the bowls produced towards the end of the first century, especially those showing the metope decoration, the wreaths and scrolls are being abandoned for figure subjects. Perhaps it reflects the outward movement on the frontier, the increasing importance of the military posts, that the decoration more commonly assumes a sporting element—the hare followed by hounds; the stag and hinds; the wild boar; the lion; the many birds; or, associated with these, scenes from the circus—the gladiators, Samnite and Thrax, in combat, the victor with uplifted shield standing above his adversary, who appeals for mercy; the bestiarius facing the lion; or the body of a victim being torn to pieces by a wild animal. With these we have a series of figures drawn from Hellenistic myths—Eros in many moods, Satyrs, Pan, Diana, Victory bearing a palm, Apollo with his lyre; and sometimes, as in the figure of Penelope, we note the influence of legendary sources. It was doubtless due to the same causes that towards the end of the first and early in the second century we find a number of new potteries coming into existence.

In the second century the centre of gravity was more and more shifting towards the north. Under Trajan and Hadrian the empire reached the limit of its northern expansion. The cohort castella, dotted along the Limes, held a large auxiliary garrison; the legionary fortresses, such as Moguntiacum, were becoming large centres of population. Towns such as Trier and Cologne were increasing in importance, and no doubt, as in modern times, trade followed in the wake of the standards, and the potters moved further north, coming more closely in touch with the growing market for their wares. In their migration northward they seem to have followed the lines of the ancient highways, along which the wares of the South Gaulish potters must have passed: the valley of the Rhone, and thence by the Doubs through Besançon to the Upper Rhine; or, following the line of the Saone and the Moselle, passing through Trier to the middle reaches of the great river. We note the beginning of the movement towards the end of the first century. The pottery of Luxeuil, situated near the head waters of the Saone, some 250 miles north of Lezoux, appears to date from the reign of Domitian.¹ About the same period Heiligenberg² in Alsace, and Lavoye near the upper waters of the Meuse, began operations. La Madeleine, situated near Nancy, some sixty miles north of Luxeuil, and Ittenweiler, near Strassburg, date from the reign of Trajan. Under Hadrian³ came the period of the potteries of Rheinzabern and Trier, through which the traditions drawn from La

¹ Fölzer, *Römische Keramik in Trier: I. Die Bilderschüsseln der ostgallischen Sigillata-Manufakturen*, p. 6.

² Forrer, *Terra-sigillata Töpfereien von Heiligenberg*, p. 224.

³ Reubel, *Römische Töpfer in Rheinzabern*, p. 56, dates the beginning of the Rheinzabern output from about the year A.D. 100.

Graufesenque and Lezoux passed on to a number of less well-known centres of production.

In the second century the dating of sigillata becomes more difficult. In it the Limes forts had assumed a more permanent character, and the periods of occupation lengthen out. The large increase in the number of centres of production brought with it a greater diversity of types employed in decoration, and no doubt to some extent this encouraged in the various groups a certain individuality in style. But no great distance separated the potteries, and it is evident that individual potters moved from place to place, carrying with them their moulds and punches—possibly the moulds themselves were articles of commerce. This in a measure must have counteracted the tendency to develop local characteristics, and it contributes to the difficulty in correctly defining the source and chronological position of individual pieces. The potters, too, had lost much of their fertility of resource, and the monotonous reproduction of motives borrowed from the earlier sites of the industry soon lead to an entire debasement of their art, especially noticeable in such offshoots from the larger centres as Westerndorf on the Inn in Bavaria, or Remagen on the Middle Rhine. Professor Knorr, writing in 1910, contrasts the comparative ease with which it is possible to establish the style and the names of the potters of the period of Vespasian, Domitian, and Trajan, with the difficulty which exists in fixing with certainty the period of most of the later Rheinzabern ware. He finds it difficult to tell whether such pieces were made early in the Antonine period, or if they should be assigned to the third century.¹ In recent years, German scholars have devoted much study to the question, not without valuable results; but it is evident that there is still considerable divergence of opinion over the dating of individual potters, and the period of their work can only be stated approximately.

Fig. 24, Nos. 1 and 2, represents a bowl found at Kastel on the Rhine, opposite Mainz, and now in the museum of Wiesbaden, which is assigned by Fräulein Fölzer as a product of Luxeuil.² It has no potter's mark, and the evidence by which it is connected with Luxeuil is perhaps somewhat slender. On the one side a spearman advances through forest growths to attack a lion, while on the other is a bovine animal and a horseman, who turns to look behind him as he gallops away. The bowl has a style of its own, and its careful execution is to be noted. The designer has done more than cover the surface with ornament: he has attempted, not without success, to reproduce a scene from the chase. The egg-and-tassel moulding, having the tassel ending in a star, and the dotted lines below it,

¹ Knorr, *Die verzierten Terra-sigillata-Gefässe von Rottenburg*, p. 22.

² Fölzer, *Römische Keramik in Trier*, Taf. i. figs. 3, 4, 8, 11, 14, and 15.



Fig. 24 (1). East Gaulish Bowl from Kastel.

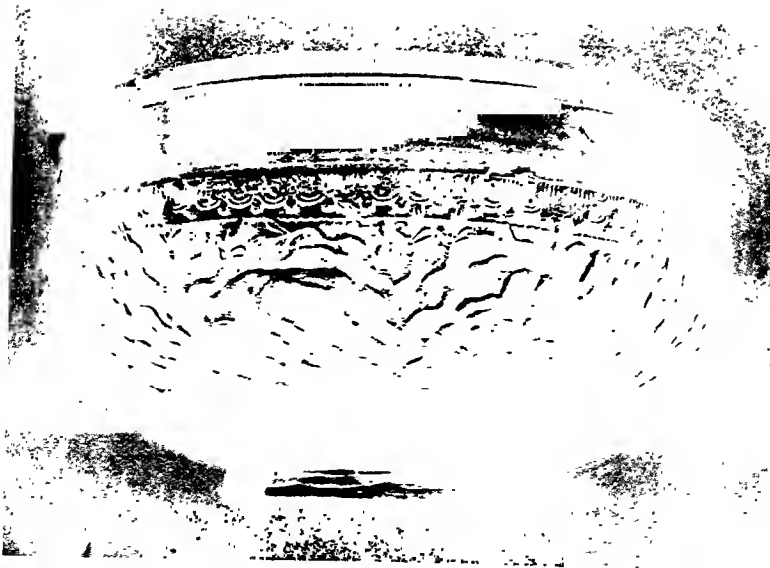


Fig. 24 (2). East Gaulish Bowl from Kastel.

are characteristic of the pieces assigned to the Luxeuil group. Undoubtedly the long branching stems terminating in trilobate leaves seem to be influenced by the work of the South Gaulish potter Germanus, but among the products of the East Gaulish group of potters there are many evidences of themes borrowed from La Graufesenque or Lezoux, as well as of the migration of the potters themselves. The bowl probably belongs to the end of the reign of Domitian, or to the early Trajanic period. Pieces which exhibit the same types have been found within the area of the extension of the fort at Heddernheim, and in the neighbouring cemetery at Praunheim,¹ where the earlier graves date from Domitian.



Fig. 25. Fragment of Lezoux Bowl by Libertus, Plicque Collection.

By the middle of the first century the fine decorative work of the Arretine potters had ceased; by the end of the century the South Gaulish potteries were nearing the close of their activity. At Lezoux the ware had lost the bright orange colour of the earlier product, and indeed the early bowls 37 are not always easy to distinguish from those of La Graufesenque; but the fineness of its work was still maintained in the early part of the second century by such potters as Libertus and Butrio. Libertus, according to Dr Plicque, carried on his industry in the reigns of Trajan [A.D. 98-117] and Hadrian.² His work in particular is distinguished by the admirable modelling and careful finish of his reliefs. By the kindness of Monsieur Salomon Reinach I am enabled to illustrate a portion of a large flat-rimmed vessel (fig. 25), a somewhat

¹ Riese, "Das römische Gräberfeld bei Praunheim," *Mitteilungen über römische Funde in Heddernheim*, Heft iv. p. 9.

² Déchelette, *Les vases céramiques*, vol. i. p. 187.

unusual form, from the Plicque Collection in the museum of St Germain. Though far from perfect, it exhibits the delicacy of his treatment. On it we note the characteristic ovolo border employed by this potter; the line of eggs, almost circular in form, separated from one another by vertical bars; and the many small figures, animals, leaves, statuettes, and flowerets scattered across the surface. The shape of the bowl appears to be derived from a metal prototype. The whole treatment is suggestive of silver work. A second example in the style of Libertus (fig. 26) is taken from a cast of a fragment of a bowl of type 37 found near Vichy, for which I am indebted to Fräulein Fölzer. The design is arranged in three



Fig. 26. Fragment in the style of Libertus, from Vichy.

parallel zones. The upper of these is filled with a hunting scene—a stag pursued by hounds. In the second zone stand a row of armed figures, no doubt representing gladiators, while lower still are marine monsters. The gladiators might figure as men-at-arms in some relief of the Renaissance.

In fig. 27 we have an example of a bowl probably dating from the reign of Trajan or early in the reign of Hadrian.¹ It was found at Wiesbaden in 1911. It bears the stamp of the potter, Albillus F., in cursive characters. The decoration is arranged in panels: on the left an athlete surrounded by small winged objects, and the seated figure of Apollo; in the centre a panel with figures of dolphins, and above them a mask surmounted by a basket with fruit; followed by a panel with four birds, and then the design repeats itself. Most of these types are to be found

¹ Oelmann, "Sigillatamanufakturen in La Madeleine bei Nancy," *Römisch-germanisches Korrespondenzblatt*, v. 1911, p. 90.

at Lezoux. Albillus appears to have worked at La Madeleine, and among the fragments of moulds found on the site of this pottery is one which reproduces the same arrangement of dolphins, with the mask and basket of fruit, associated with the sinuous object representing a cornucopia, which is to be noted in the angle of the panel to the left of the Apollo, and which occurs several times in other parts of the design. The same features are to be seen in a fragment from the ditch of the earth fort at the Saalburg, where there is also a piece of a bowl bearing



Fig. 27. East Gaulish Bowl by Albillus, from Wiesbaden.

the figure of the athlete.¹ This earth fort probably dates from the early years of Hadrian, and was occupied from about A.D. 120 to 140. The finds from its ditch are instructive, as they show that during the reign of Trajan, and probably early in the following reign, the transition style had not disappeared, and we find a number of examples of bowls with patterns reminiscent of the earlier work of South Gaulish or Lezoux potters, but much more coarsely executed. The ware of Albillus has also been found in the Heddernheim cemetery in a grave associated with a coin of Trajan.

At La Madeleine the designs were influenced by Lezoux, and the

¹ Folzer, *Römische Keramik in Trier*, Taf. i. fig. 40, and Taf. ii. figs. 37 and 39.
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potters, moving northward, as Albillus appears to have done, carried their types with them. He is believed to have worked later in Heiligenberg,¹ where his stamp is found on undecorated ware; and his style seems to have influenced much of the pottery from Trier.

Although generally the deterioration in design becomes evident at an early period in the second century, there are individual potters who rise above their fellows as showing a higher decorative sense. In the Trajan period, Libertus is one of these. Somewhat later in the reign of Hadrian [A.D. 117-138] we can point to Satto and Saturninus; and even



Fig. 28. Bowl by Saturninus. Museum of Trier.

later the work of Dexter, who possibly belongs to the reign of Marcus Aurelius, stands out from the general degradation.

A favourite subject with both Satto and Saturninus is a frieze of cupids employed in the vintage, plucking the grapes from the vines and piling them up in baskets. The theme was part of the common stock of the Roman decorative craftsman, but among the potters it is a more characteristic feature of the Satto group than of any other. The bowl, fig. 28, is from the collection at Trier, and bears the stamp of Saturninus. The exact position of the pottery of the Satto group has not yet been definitely ascertained. The designs employed show South Gaulish influence, and probably there was some migration from place to place. The period of the manufacture is established by the presence of fragments in the Trajanic cemetery at Heddernheim, and in

¹ Forrer, *Heiligenberg*, Taf. xv. 1.

the ditch of the earth fort at Saalburg. The principal period of production probably dates from the reign of Hadrian.¹

Fig. 29 represents another bowl, probably of the Hadrianic period. It was found in a grave at Kastel, and is now in the museum of Wiesbaden. It exhibits a somewhat confused grouping of animals: the lion, the boar galloping headlong in one direction, the hounds flying in another; and here and there inserted in the design we find star-shaped

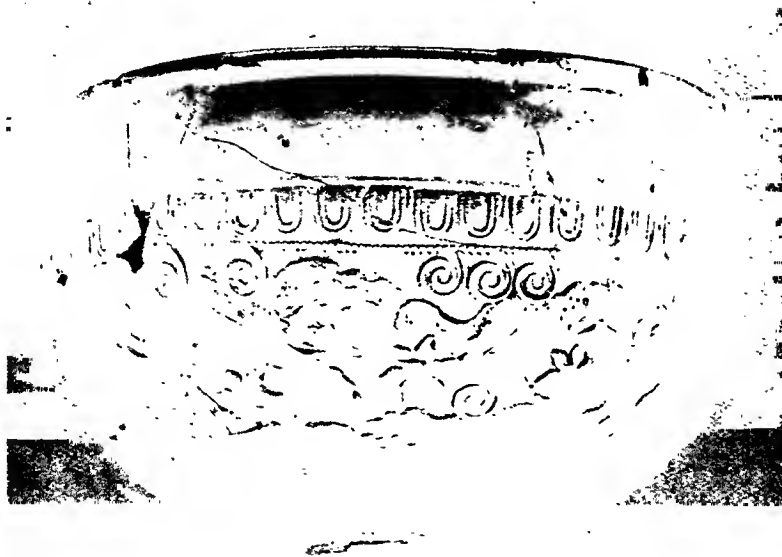


Fig. 29. East Gaulish Bowl from Kastel.

flowers, groups of leaves, and meaningless spirals; perhaps in the latter we may see the influence of barbotine decoration, which was beginning to be employed on the Rhine. The bowl is probably from La Madeleine. The spirals and the lion appear on one of the moulds found on this site. Fräulein Fölzer notes that the curious cruciform ornament composed of five leaves, to be seen on the right of the bowl, and again on the lower margin on the left, is highly characteristic of Albillus.² This motive is also to be seen on a bowl of the same type from Stockstadt,³ and we have it on a fragment from the *titulus* of the earth fort at the Saalburg.

¹ Fölzer, *Römische Keramik in Trier*, p. 24.

² *Ibid.*, Taf. i. fig. 20; *ibid.*, p. 11; *ibid.*, Taf. ii. 44.

³ Drexel, "Kastell Stockstadt," *Limes Report*, Taf. xviii. fig. 21.

Fig. 30, a bowl found on the Mauritius Strasse, Wiesbaden, and now in the museum there, may be classified as belonging to the reign of Hadrian. It has no maker's stamp, but from the style it is probably by the potter Janus. It exhibits more than one of his characteristic types. The rope moulding arranged in semicircles, associated with leaves and small birds, is to be seen upon a bowl bearing his stamp, JANVF. from Unterweissach.¹ The same moulding with leaves and birds, the same five-pointed rosette, occur on fragments of his bowls at Heiligenberg.² Janus is one of those potters who appear to have moved from place to place. Fräulein

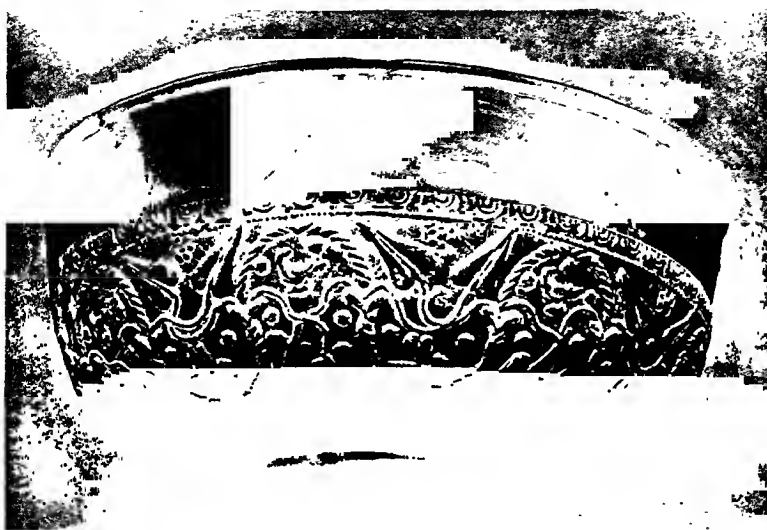


Fig. 30. East Gaulish Bowl from Wiesbaden.

Fölzer claims him for La Madeleine, and illustrates a fragment of a mould found there in the style of the bowl from Unterweissach. There is no doubt that he worked at Heiligenberg, where many fragments of his ware have been found. At a later period he seems to have moved to Rheinzabern. Dr Reubel³ suggests that he learnt his trade probably in Gaul, possibly in Lezoux, and places his beginnings at Heiligenberg about A.D. 100, and that he flourished at Rheinzabern between A.D. 120 and 140-5; but, admittedly, a considerable element of speculation must enter into any such attempts to set out chronologically the career of a potter. On the bowl before us we can still trace the style of the Claudian potters

¹ Knorr, *Terra-sigillata-Gefässe von Cannstatt*, Taf. xxvi. fig. 3.

² Forrer, *Heiligenberg*, Taf. xxix. figs. 5, 6, and 13.

³ Reubel, *Römische Topfer in Rheinzabern*, p. 38.

initiated probably by Masclus and his group; but we have left behind us the lightness of treatment, the delicacy in execution, which characterises the wreaths and scrolls down to the end of the first century, and it is obvious that the general decadence of the potter's art had set in.

It is interesting to return for a moment from the consideration of these products of the East Gaulish potters, and to glance at a couple of typical Antonine bowls from Lezoux. In the Antonine period Lezoux appears to have reached its highest prosperity. Its production must have



Fig. 31. Lezoux Bowl by Cinnamus, from Newstead.

been very large, and its wares widely exported. Traces of its commerce are to be found on the Rhine and the Danube, but in the Limes forts the pottery of Lezoux is not common, and it is evident that with the rise of the East Gaulish manufactories its potters were driven to seek their principal market in Western Gaul and in England. As an example from the reign of Pius [A.D. 138-161], I have illustrated a bowl by Cinnamus, found at Newstead (fig. 31).¹ This cannot have come to Scotland before about the year A.D. 140, and it was probably made before the close of the Emperor's reign in A.D. 161. Déchelette places Cinnamus with the potter Paternus as having worked in the Antonine period at the time when Lezoux had

¹ Curle, *A Roman Frontier Post*, p. 224, pl. xliv.

reached the zenith of its prosperity.¹ Knorr² notes the occurrence of a good many examples of the wares of Cinnamus on the Danube, and assigns his activity to the reign of Trajan. This is clearly too early for the Newstead example. The bowl belongs to a type which is well known in this country, in which large medallions are combined with the earlier metope decoration. In the central medallion stands a figure of Venus with one arm resting on a column; on her right is a figure of an owl; on the left a snake. In the panel on the left of the medallion is the figure of a dancer holding a scarf; further to the left a bearded man. The remaining panel of the design is divided horizontally—in the upper half a bird, in the lower a figure of Cupid. In one panel is the stamp CINNAMI, impressed retrograde. The colour and glaze of the bowl are good, and, although the modelling of the figures is mechanical, the general effect and execution compare favourably with most of the work of the period produced further north, by the Rhine and the Moselle.³

In fig. 32 we have a bowl found at Wingham, Kent, now in the British Museum. It bears the stamp, somewhat poorly executed, of the Lezoux potter Paternus. The central figure of the design is a horseman in cuirass, brandishing his sword, while his horse flies along at full gallop. All around him in somewhat confused fashion are figures of animals in rapid motion—hounds and deer, galloping horses, wild boar, and strange indeterminate quadrupeds; while mingled throughout the figures are long pointed leaves suggesting a forest background to the chase. The style is barbaric, but it is characteristic of the time, and we find it, not only at Lezoux, where it is common on the bowls of Albucius and others, but also further north.

A very large proportion of the sigillata which found its way to the Limes forts and the Rhine towns in the second century must have been supplied by Rheinzabern and Trier, together with the less important potteries, such as Westerndorf and Remagen, which branched off from these larger centres of industry. Rheinzabern, lying on the left bank of the Rhine to the north of Strassburg, was the seat of a flourishing colony of potters, who have left many relics behind them, in their kilns, in their graves, and in the fragments of their broken ware. The production of decorated sigillata at Rheinzabern appears to have continued for about a hundred years, which came to an end about the year A.D. 200, or a little later.⁴ The trade of Rheinzabern from the time of Hadrian

¹ Déchelette, *op. cit.*, vol. i. p. 190.

² Knorr, "Terra sigillata aus Geislingen," *Fundberichte aus Schwaben*, xviii, p. 38.

³ Mr Atkinson expresses the opinion that the greater part of the pottery found on the Limes and on other German sites which has been assigned to Lezoux has really come from Blickweiler in the Palatinate. *The Romano-British Site on Lowbury Hill*, p. 58.

⁴ Reubel, *Rheinzabern*, p. 56.

onwards, together with the output of the potteries most closely associated with it, such as Heiligenberg, Ittenweiler, Kräherwald, Waiblingen, and Westerndorf, appear to have found a market principally in the country south of the Main and in the lands bordering on the Danube; while the supplies from the Trier potters and their branches, such as Remagen and probably also Sinzig near Bonn, were carried into Gallia Belgica and to the north of the Main.¹

Generally speaking, the Rheinzabern bowls are coarser and much less



Fig. 32. Lezoux Bowl by Paternus, from Wingham, Kent.

highly glazed than those of the Middle or South Gaulish potters, and towards the end of the second century barbotine decoration begins to supersede the older method of treatment. Fig. 33, from the museum of Speyer, is characteristic of the output of the Rheinzabern potters, and is dated by Dr Behn of Mainz as about the middle of the second century. The mould for a bowl in the same style is illustrated by Ludowici.² The modelling is coarse and poor. The band of ovolo decoration is large and clumsy. The surface is divided into rectangular compartments, in each of which is placed a single figure—Venus, a man wearing a toga,

¹ Folzer, *Römische Keramik in Trier*, p. 83.

² Ludowici, *Stempel Bilder römischen Töpfer aus Rheinzabern*, p. 228, fig. 9.

a woman carrying a basket on her head. The same themes repeat themselves in the design. Contrasted with the work of the first century, the degradation which had gradually overtaken the potter's art is apparent. The careful modelling of the reliefs has disappeared, and more and more we note the occurrence of designs in which human figures, animals, or conventional motives are placed upon the surface without relation to each other, and with wide, undecorated spaces between them.

It is rarely attractive to follow the gradual degeneration of an ornament form or art type through the phases which precede its final



Fig. 33. Rheinzabern Bowl, Museum of Speyer.

disappearance. The pattern, the design, grows coarse and clumsy; continual copying has blunted the outlines, has obscured the meaning; and so it is with the potter's art as we see it at Rheinzabern, at Trier, and at such potteries as Remagen and Sinzig. A few examples will suffice to illustrate the final stages of decline.

At Trier a number of the Roman kilns were laid bare in 1893 and 1907, and from them were gathered numerous potsherds of different vessels dating from the first down to the fourth century. The most of these pieces, however, were of the second and third centuries, and among them the fragments of sigillata and of moulds formed a considerable proportion. Some of the vessels had evidently been imported from further south, but the greater number had clearly been made on the spot. The earliest group of potters producing red ware appears to date from the time of

Hadrian. It drew its designs from Lezoux and the East Gaulish potteries, but it also had a style peculiar to itself. Both Albillus (whom we have seen at La Madeleine) and Satto appear to have strongly influenced the earlier output of the group. A second group of potters is apparent in the last thirty years of the second century, using a distinct series of designs, drawn sometimes from metal-work, sometimes from Roman reliefs or statuary. Among these, the products of Censor and Dexter may be mentioned. Their wares are to be found in the fort of Niederbieber.



Fig. 34. Trier Bowl from Unna, Westphalia.

first occupied about A.D. 190, so that they were probably working at the beginning of the third century. A third group producing about the same time is distinguished by poorer work and the gradual degeneration of their designs until they become unrecognisable. With them the decorated sigillata in Trier comes to an end. But even in the final period, when the industry was fast approaching its end, we still see designs which must have come from Arezzo, and which the Arretine potters themselves must have borrowed from earlier workers: Scylla and the barque of Ulysses, figures from the Iphigenia cycle, Prometheus with the eagle, Hercules and the lion, Diana, Acteon, Centaurs, and other themes.

In fig. 34 we have a bowl found in 1912 at Unna in Westphalia—a rare instance of the drift of Roman pottery across the Limes. With

another bowl, somewhat similar in character, it had been used to hold the ashes of the dead. The bowls were illustrated and described by Herr Hähnle in the *Römisch-germanisches Korrespondenzblatt* for 1913, p. 89, where he points out that all the types employed in their decoration come from Trier. In one panel on the example illustrated is the figure of Victory borne on a quadriga, holding aloft a palm in the left hand, a wreath in the right. In the adjoining panel on the left is a man carrying a palm, moving towards a figure seated, the chin resting on the left hand—the seated Apollo of the earlier bowls; between them a large vessel with a palm. The spaces separating the figures are filled with spirals. The ovolo moulding is peculiar from its double tassel. The bowl bears no maker's name, but it apparently belongs to the earlier group of the Trier potters, whose style is influenced by the Middle and East Gaulish designs, and in particular those of Vichy and La Madeleine, and whose period lies between the years A.D. 120 and 180. Whoever the potter may have been who produced it, it is apparent that his style very strongly influenced the work turned out from the kilns at Remagen. Herr Funck, who investigated these together with the Roman graves in the town, dates the moulds found there as belonging to the first half, and probably within the first third, of the second century; but it is difficult to believe that the bowl in question is earlier than the middle of the century.¹

I have included this bowl from Unna because it illustrates the connection between Trier and a smaller pottery at Sinzig near Bonn, which, like Remagen, must have branched off from it.

Figs. 35 and 36 are two bowls from a group of pottery (preserved in the museum of Bonn) which in 1913 had recently been disinterred from the site of the kilns at Sinzig. At the time no particulars of the find had been published, though in the interval which has elapsed the full details have doubtless appeared in print. The director of the museum was good enough to allow me to obtain photographs, but I am ignorant of the circumstances of the find. The bowls, which are of considerable size, are among the rudest examples of sigillata I have met with. They are roughly and unskilfully made. The colour is a dull orange yellow. In fig. 35 the ovolo border is very imperfect, the dotted line beneath it irregular. In the panel fronting us in the illustration is the figure of the man bearing a palm. To right and left of his head are bunches of grapes, beneath these are concentric circles, and lower still a pair of cornucopias. An ornament composed of two concentric circles joined together by three beaded bands separates each figure from the one adjoining. In the next panel is a figure of Venus holding a scarf above

¹ Funck, "Römische Töpfereien in Remagen," *Bonner Jahrbuch*, Heft 119, p. 333.

her head; on her left stands an object in which it is possible to recognise an extremely debased figure of Cupid.

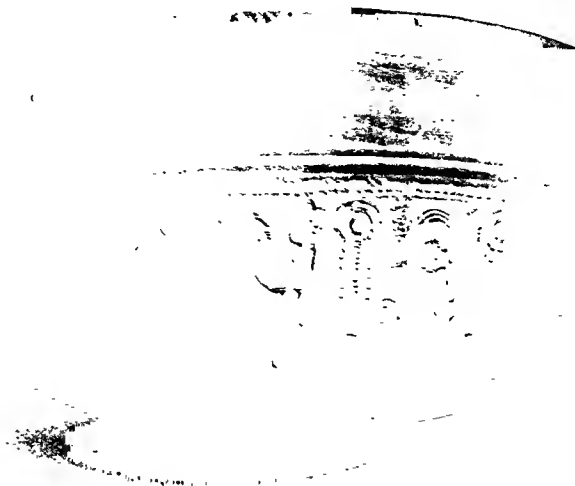


Fig. 35. Bowl from Sinzig.



Fig. 36. Bowl from Sinzig.

The second bowl (fig. 36) is similar in colour, and no less rude in execution. The ovolo border is clumsy and imperfect. Beneath it is an

arrangement of demi-medallions formed by a series of festoons, each of these terminating at the point of juncture with an animal head, while clumsily inserted between the heads is a large pointed leaf. Alternately in the demi-medallions are inserted a figure—probably intended to represent Cupid, seated facing the left, with arms outstretched—and a male bust. Beneath the festoons runs a procession of animal forms, and around the lower margin of the decoration a line of concentric circles.

The greater number of the types employed on these bowls—the figures of Venus and Cupid, the man bearing the palm, the bunches of grapes,

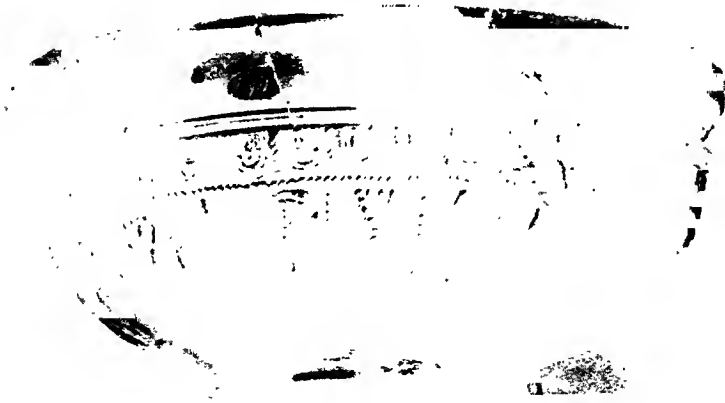


Fig. 37. Bowl from Trier.

the seated Cupid, the festoons, the concentric circles—are well-known Trier types. On the fragments of moulds found at Remagen a number of the same types are to be noted. There is the ovolo without the tassel, the seated Cupid, the busts, the festoon ending in animal heads, the concentric circles, the cornucopia; but, judging from the illustrations to Herr Funck's paper, the fragments at Remagen are hardly so rude in execution as are the bowls from Sinzig. The Remagen potters appear to have drawn their inspiration from the earlier Trier potters, some of whom probably operated before the middle of the second century. The Sinzig pottery belongs to another local group established still further from the original centre, with a corresponding weakening of the tradition and debasement of the art. In the absence of particulars of the find we need not speculate as to whether the bowls should be attributed to the

reign of Pius or later; their chief interest here lies in the fact that they illustrate the dying out of the sigillata industry.

Fig. 37, a bowl from Trier, is attributed by Fräulein Fölzer to the potter Maiiaaus, chiefly from the use of the zigzag lines which he employs to divide the surface into panels, each containing a leaf or conventional ornament. In poverty of design we may compare it with the Rheinzabern bowl (fig. 33). Sigillata in the style of Maiiaaus is associated with the products of the potters Censor and Dexter in the

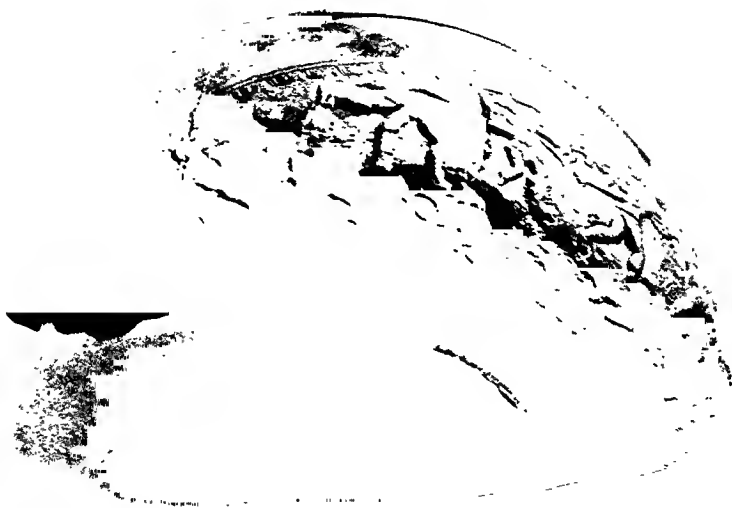


Fig. 38. Trier Bowl from Wiesbaden.

fort of Niederbieber, occupied in A.D. 190. He thus appears to belong to the close of the second century. It would be misleading to convey the impression that fig. 37 is altogether a typical bowl of the period of Commodus [A.D. 177-192] or Severus, because it is evident that even in the latter half of the second century, notwithstanding a general lowering of the standard of execution, there is yet a considerable variety in the designs employed; and in a few rare examples, such as a bowl by Dexter found at Xanten, and one or two of his products from Trier, the designs, composed of interlaced garlands with masks and cupids, show an individuality and even a certain charm of style.

As a pendant, then, to fig. 38, I have illustrated a fragment of a large bowl found at Wiesbaden, also attributed to Maiiaaus, representing figures

of bestiarii and gladiators surrounded by animal forms, and with large leaves scattered here and there among them.

The last example in the series (fig. 39) comes from the fort of Zugmantel,¹ which lies upon the Limes a little to the north of Wiesbaden. It was discovered in 1912, in one of the many cellars which are a feature of this site. The cellar showed signs of three different periods of construction, which unfortunately could not be distinguished chronologically. In it were found a number of pieces of pottery² and several coins:

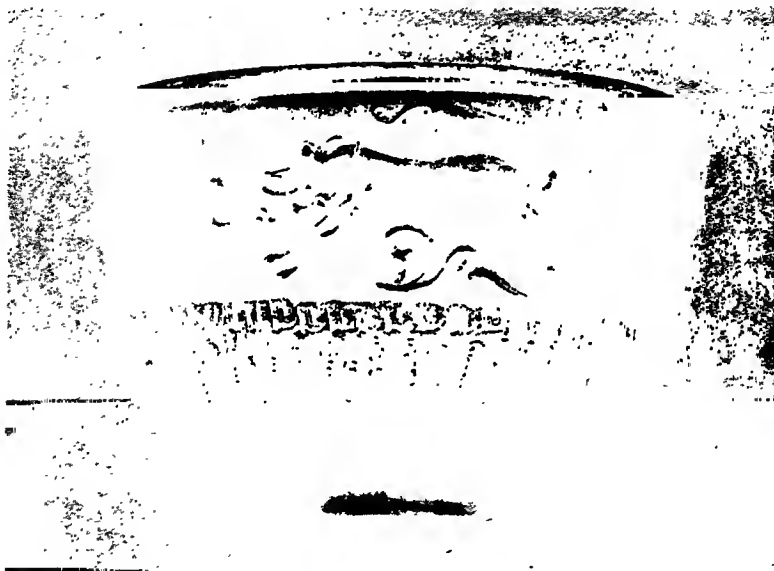


Fig. 39. Rheinzabern Bowl by Julius, from Zugmantel.

the latest were those of Severus, A.D. 193-211; Elagabalus, A.D. 218-22; and Julia Mamæa, A.D. 222-35. The bowl, which is unusually large in size, bears the stamp JVLIVSF retrograde. It has been formed in a mould in the ordinary way. There is the usual band of ovolo moulding, here very poorly executed, and beneath it the plain surface broken up by a series of vertical beaded lines. On the wide rim is a figure of a great hound chained to a post, executed in barbotine, while above and beneath it are the pointed leaves, with stems twining in spirals, so characteristic of the artist in this medium. The potter Julius appears to have worked at Rheinzabern, and his ware ranks among the coarsest products of that centre. Some three hundred of his bowls have been noted at Zugmantel.

¹ "Kastell Zugmantel," *Saalburg Jahrbuch*, 1912, pp. 30, 59, fig. 23.

Dr Barthel assigns his working period to the reigns of Marcus Aurelius and Commodus.¹ Dr Reubel puts the end of his period as about the year A.D. 200, or perhaps somewhat later, and considers that he was one of the last, if not the very last, of all the Rheinzabern potters who produced moulded sigillata.² In the bowl before us we see the passing of the tradition which, coming from Arezzo, for two centuries inspired the provincial potters, and thus ended on the Rhine.

It is a story to which archaeology offers a good many parallels. Some form of Greek or Roman art is carried to the provinces or beyond the frontier, it is imitated and adapted, the theme becomes worn out and finally disappears. In Italy the potters of Arezzo or Puteoli inherited the traditions of the art of Greece. They were supported by a wealthy, art-loving people, and they had before them in the monuments of the time, in stone-work and in metal models of the highest order. Even in Southern Gaul, in the cities bordering on the Mediterranean and perhaps also by the Rhine, they must have found an appreciative clientele.

The potters who first brought the industry beyond the Alps, although they produced a wonderful glaze upon their ware, never attained to the delicacy of modelling and the variety of design of the Italian workers. By the middle of the first century the Arretine industry had decayed: probably glass or metal had largely supplanted its wares. Thenceforth it gave no new impulse to the Gaulish workers. The expansion of the empire, and the increasing population which that expansion brought with it to the north, doubtless induced the Southern potters to move northward, following the growing demand. It was easier and more profitable to ply their trade by the waters of the Rhine or the Moselle than to send their wares by boats and mule trains over the many miles which separated them from their markets.

As the industry moved north further from Italy it became more imitative, more competitive, more commercial. The sharpness of the early reliefs gradually disappeared, the bowls became coarser and the glaze poorer. The clientele of the potters had changed materially since the Augustan period. The legionaries who left behind them the Arretine cups in the fort at Haltern were men drawn from Italy itself, or perhaps in some degree from Gallia Narbonenses. But with the second century the legionaries recruited in Italy became fewer and fewer. By the reign of Pius the legions were largely composed of the provincial element, and more and more as time went on from the children of the soldiers themselves. The auxiliaries who garrisoned the Limes forts added fresh elements to the strangely mixed military population, among whom the potters of Rheinzabern and of Trier found

¹ Barthel, *Kastell Zugmantel*, p. 127.

² Reubel, *op. cit.*, p. 42.

a market for their wares. It seems plain that at the end of the second century the conditions on the frontier were not such as could infuse new life into the worn-out sigillata industry. The decorated bowls had had their day, and were finally superseded in public estimation by the increasing production of vessels of glass, which in countless forms and varying colours issued from the workshops of Trier and of Cologne.

MONDAY, 9th April 1917.

THE HON. JOHN ABERCROMBY, LL.D., President.
in the Chair.

A Ballot having been taken, the following was duly elected a Fellow :—

FRANKLIN A. PARK, 149 Broadway, New York.

The following Donations were announced and thanks voted to the Donors :—

(1) By MURDO MORRISON, Corresponding Member :—

Axe of indurated Claystone, imperfect at the butt, $3\frac{3}{8}$ inches in length by $1\frac{3}{4}$ inch in breadth at the cutting edge; sub-conical Whorl of micaceous schist, $1\frac{1}{2}$ inch in diameter; both found some 300 yards distant from a kitchen midden at Bragar, Lewis, and same distance from the beach.

Ball of granitic Stone, 4 inches in diameter, found in kitchen midden at Bragar, Lewis.

(2) By Mr JOHN MASTERTON, H.M. Inspector of Mines, 86 Morningside Drive :—

Iron Padlock, consisting of a rectangular lock, measuring $3\frac{5}{8}$ by $2\frac{1}{2}$ by $1\frac{1}{2}$ inches, and a flat loop of iron the ends of which pass respectively inside the lock and into a socket lying along the top; at the base, on the opposite end from the loop, is a slot for the insertion of the key; found along with another padlock of similar construction, 5 inches in length, while tiring at Dunglass Quarry, half a mile south of Balaggan House, Strathblane, Stirlingshire (fig. 1).

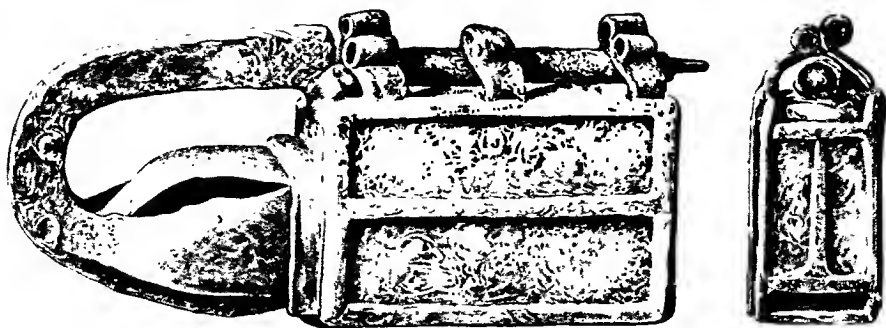


Fig. 1. Iron Padlock from Dunglass Quarry, Strathblane. ($\frac{1}{2}$.)

(3) By HIS MAJESTY'S GOVERNMENT:—

Calendar of the Liberate Rolls preserved in the Public Record Office.
Henry III. Vol. i. 1226-1240. London, 1916.

(4) By T. J. WESTROPP, President of the Royal Society of Antiquaries
of Ireland, 115 Strand Road, Sandymount, Dublin, the Author:—

Notes on Certain Primitive Remains (Forts and Dolmens) in Inagh
and Killeimer, Co. Clare. Reprinted from the *Journal of the Royal
Society of Antiquaries of Ireland*, vol. xlv. part 2. Pamphlet.

(5) By VICTOR A. NOËL PATON, F.S.A. Scot.:—

Report to the Right Hon. The Lord Chief Baron and the Hon. The
Barons of His Majesty's Court of Exchequer in Scotland, by the King's
Remembrancer, relative to the Tomb of King Robert the Bruce, and the
Cathedral Church of Dunfermline. Edinburgh, 1821. 4to.

Description of the Diptych at Wilton House, containing a Portrait
of Richard II., by George Scharf, F.S.A. Printed for the Arundel Society,
1882. 4to.

The following Communication was read:—

I.

EARTH-HOUSES AND THEIR OCCUPANTS. BY DAVID MACRITCHIE,
F.S.A. SCOT.

The term "earth-house" is here used in its common acceptation, as denoting an underground structure almost invariably built of stone, and used as a dwelling. *Yird-hoose*, or *eird-hoose*, is the form of the word in the vernacular of Lowland Scotland, and *iord-hus* in Scandinavian speech. *Tigh fo thalaimh* ("underground house") is one of the Gaelic equivalents, but a more usual Gaelic name is *uam* or *uamh*, "a cave," which word is corrupted into *weem* or *oo-ag* by non-Gaelic speakers. As is well known to antiquaries, such structures are found in various parts of the British Isles and in foreign countries. The present paper relates chiefly to those of Scotland, with an occasional reference to other examples.

Although the correctness of the term "house" is now generally admitted, it may be useful, for the sake of those who have not hitherto turned their attention to this subject, to state briefly the reasons for regarding earth-houses as dwellings. At one time there was considerable dissent from this conclusion. It was pointed out that underground structures were used in various countries as storehouses, as tombs, and as temples. Undoubtedly this is true, and the statement applies not only to past ages but also to the present. Moreover, there are underground structures, of the ordinary "earth-house" plan, which were in some cases primarily and solely used as tombs, in other cases as dwellings, and in others as tombs *after* being used as dwellings. Attention was drawn to this circumstance by Sven Nilsson in 1867, if not earlier.¹ "We may rest assured," he says, "that before the savage of the forest plains of Scania and West Göthland began to build gallery-chambers for the dead, he had already constructed similar ones for the living."² Nilsson therefore divides these galleried structures into two classes—gallery-huts and gallery-tombs. Sir Bertram Windle writes to the same effect in his *Life in Early Britain* (London, 1897), p. 55. He observes that Sir Arthur Evans "points out that the early barrows of the North are in fact a copy of a primitive kind of mound-dwelling, such as is still represented by the gamme of the Lapp." This idea finds its fullest development in the huge burial-mounds of Japan, which were constructed as sepulchres and not as dwellings, but with an entrance

¹ Perhaps as early as 1844, but my knowledge of Nilsson's work is limited to the enlarged edition published in English in 1868 (London), and edited by Sir John Lubbock, under the title of *The Primitive Inhabitants of Scandinavia*.

² *Op. cit.*, pp. 142-3.

passage which is very unsuitable for the former purpose although of much use for the latter. Among the Eskimos of the Aleutian Islands a custom formerly obtained which resulted in their semi-subterranean buildings serving both purposes at the same time; for when a member of their large communal dwellings died, his corpse was walled up in the compartment which he had inhabited, and his kinsfolk continued to live on as before in the tribal home.¹ It is unnecessary to enlarge further upon this detail, which has been introduced here for the purpose of showing that the earth-house and the sepulchre cannot be altogether dissociated from one another.

So far as regards Scotland, however, the earth-house is a dwelling before anything else. The pronouncement made by Dr John Stuart, Secretary of this Society, on 14th December 1868, holds good to-day. "It has been doubted," he remarks, "if these houses were ever really used as places of abode, a purpose for which they seem in no degree to be suited. But as to this there can be no real doubt. The substances found in many of them have been the accumulated débris of food used by man, and indicate his presence as surely as the kindred kitchen middens which have recently attracted so much attention, while their occurrence in groups marks the gregarious habits of the early people. The bones of the ox, deer, and other like creatures have been found, as well as the shells of fish, mixed with fatty earth and charred wood. Ornaments of bronze have been found in a few of them, and beads of streaked glass. In some cases the articles found would indicate that the occupation of these houses had come down to comparatively recent times, as is the case of the Irish crannogs, where objects of the rudest times are found alongside of those of the seventeenth century. The traces of hut foundations on the surface in connection with some of these underground chambers are also conclusive of their use as places of, at least, occasional retreat of man."²

The facts cited by Dr Stuart will prove convincing to most people. But if further evidence be required, it will be found in those instances where obstructions have been deliberately built or placed in the entrance passage, rendering access to the interior difficult. The best examples of this peculiarity are found in Ireland, and the nature of these obstacles will be at once understood by an examination of the sections and plans of the earth-house at Rathmullen, County Down. There is no room for doubting that this structure was built as a refuge for man, and not for the purposes of a storehouse, a tomb, or a temple.

¹ W. H. Dall, *On the Remains of Later Pre-Historic Man obtained from . . . the Caves of the Aleutian Islands*, Smithsonian Contributions to Knowledge, 318, Washington City, 1878, p. 7.

² *Proceedings*, vol. viii. p. 25.

The accompanying illustrations explain the Rathmullen earth-house. It is 120 feet 6 inches in length; its general height is 6 feet; and the

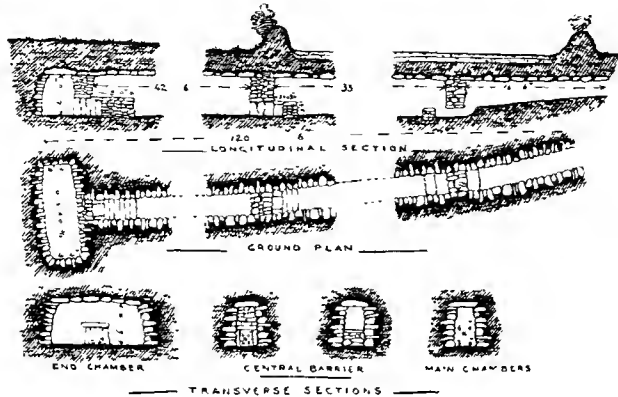


Fig. 1. Sections and Ground-plan of Earth-house at Cove Hill Rathmullen, Co. Down.

doorways at the barriers are 2 feet 6 inches in height. These barriers are in some cases built from the ground upward, and in others from the

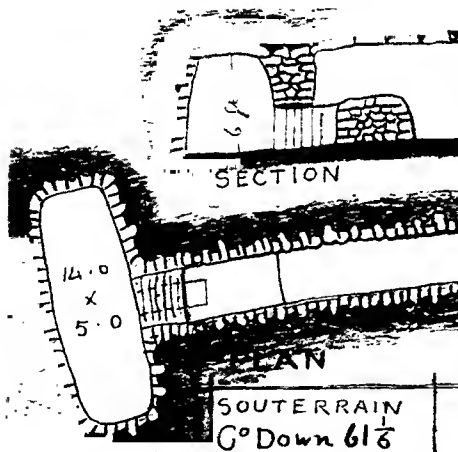


Fig. 2. Enlargement of Section and Ground-plan of Earth-house at Rathmullen, Co. Down.

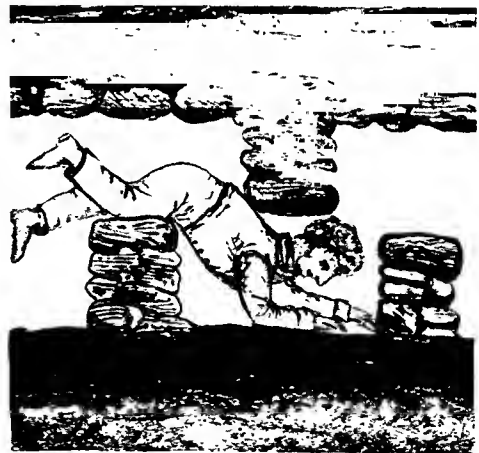


Fig. 3. Figure of Ulsterman at Barriers in Earth-house at Rathmullen, Co. Down.

roof downward. They form an integral part of the original structure, and it is obvious that their purpose is to impede the advance of an intruder. The third illustration shows, by an imaginary figure of a modern Ulsterman, the risk attending intrusion if the occupant of the earth-house was an enemy of the intruder. In passing, it may be

observed that this human figure is drawn to scale, thereby indicating the general dimensions of the passage.¹

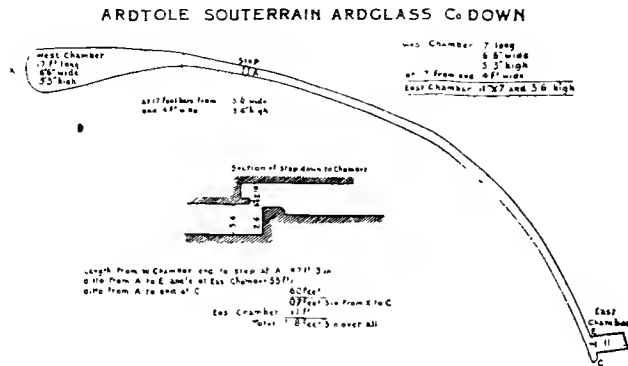


Fig. 4.

Another Ulster earth-house, that at Ardtole, County Down, exhibits the same idea of a deliberate impediment placed in the way of an



Fig. 5. Interior of Earth-house at Ardtole, Ardglass, Co. Down.

intruder. The total length of this souterrain is 118 feet 3 inches; most of it consisting of a long, curved gallery, the height of which throughout is apparently 3 feet 6 inches, and the width 3 feet. The two chambers rise

¹ I am indebted to the late William Gray, M.R.I.A., Belfast, for these and other Ulster illustrations.

to a height of 5 feet 3 inches. The only obstacle occurs at a distance of 60 feet from the entrance. It is formed by a "step" down to the level of the inner chamber, which necessitates the visitor lowering himself through a contracted ingress, where the roof and the floor are only about 18 inches apart.

The photograph here reproduced of the passage in the Ardtole earth-house (fig. 5) shows that it, like other Irish earth-houses, is of the same style of architecture as those of Scotland.

The obstructive "step" is again seen in a souterrain at Bog Head, County Antrim.¹

In Scotland there do not seem to be any obstacles corresponding exactly with those of Ireland. But the same idea is not wholly absent from our Scottish weems. A notable instance is in the mound-dwelling at Milton of Whitehouse, in the Braes of Cromar district of Aberdeenshire. It was first described in *Scottish Notes and Queries*, Aberdeen (vol. ix., No. 10, March 1896), by Mr George Gauld, who had "recently" discovered it.² The ground-plan shows that its passage is intentionally blocked at two places by large upright



Fig. 6. Ground-plan of Mound-dwelling at Milton of Whitehouse, Cromar, Aberdeenshire, showing obstructions at H and I.

stones. The larger of these stands at the point where the passage turns abruptly to the right, forming an acute angle. It is "a granite slab, 3 feet 11 inches high. This slab almost fills the passage, which is narrowest at this point." "In the passage at the entrance stands a flat hornblende slab (2 feet 4 inches in height)." Mr Gauld adds that "this probably formed the door to the house," but it is difficult to see how it could be so used. More likely it was intended as a stumbling-block in the way of an unwelcome intruder; like the taller slab at the bend.

With regard to this earth-house, it may be explained that it stands, or stood, in a pre-existing knoll; and Mr Gauld concludes, with good reason,

¹ This souterrain is described by Mr W. J. Fennell in the *Ulster Journal of Archaeology*, July 1896, pp. 272-3.

² A supplementary notice by myself, more fully illustrated, appeared under the title of "An Aberdeenshire Mound-Dwelling" in *The Antiquary*, London, vol. xxxiii., May 1897. It was also noticed by the Hon. John Abercromby in our *Proceedings*, vol. xxxviii. p. 121.

that it "was built to suit the slope of the knoll, and if roofed with wood, as it most likely was, would present the appearance of one-half the roof of an ordinary house."

South Uist furnishes another example of what appears to be intentional blocking, in the case of *Uamh Sgalabhad*—the Weem or Oo-ag of Skalavat.¹ Here there is a slab of transported rock which narrows the passage so as to make it almost impassable. Had the builders not wished to utilise it as an obstruction, they could easily have built the opposite wall at a greater distance from it. If this assumption be correct, the entrance to this weem would probably be at the left-hand side of the picture, and the egress at the right hand might be concealed from outside view by bushes or otherwise. However, this is merely a detail.

The constriction of passages at certain points ought probably to be regarded also as intended to impose a temporary check to the advance of an intruder.

In all such cases, especially in the notable instance at Rathmullen, Ulster, it is manifest that the earth-house was built for no other purpose than to afford a retreat for men. The occupation may have been casual and intermittent, or the earth-houses may have been occupied (as I am inclined to believe) throughout the winter months, to be abandoned for a nomadic life during the milder seasons, but that they were human habitations is evident. It is hardly conceivable that anyone would maintain that only those which were built with intentional obstructions were human abodes. Not unlikely these represent an earlier type, just as a fortified house belongs to an older period than an undefended mansion.

Of the date of these buildings we can speak with certainty in some cases, namely those which have stones of undoubtedly Roman workmanship built into their walls. A clear instance of this is the weem at Crichton, Mid Lothian (fig. 7), where the Roman origin of more than forty stones has been established. The fact of their situation as integral parts of the structure proves that it was built after the advent of the Romans in Mid Lothian, and after their abandonment of some station in that neighbourhood; perhaps even subsequent to their departure from Scotland. Of similar character was the weem at Newstead (figs. 8 and 9), now obliterated, which stood near the famous Roman post in that locality. It was discovered in 1845, and is described in vol. i. of our *Proceedings* by Dr John Alexander Smith. It was built of hewn stones, many of them bevelled on one edge, and two of them presenting "a rope-moulding of distinctively Roman character."² One of these two, as we have been

¹ Described by Captain Thomas, *Proceedings*, vol. vii. pp. 167-8.

² Dr Joseph Anderson, *Scotland in Pagan Times*, 1883, p. 301.

lately informed by Mr Alexander Curle, is now preserved at Mertoun House.

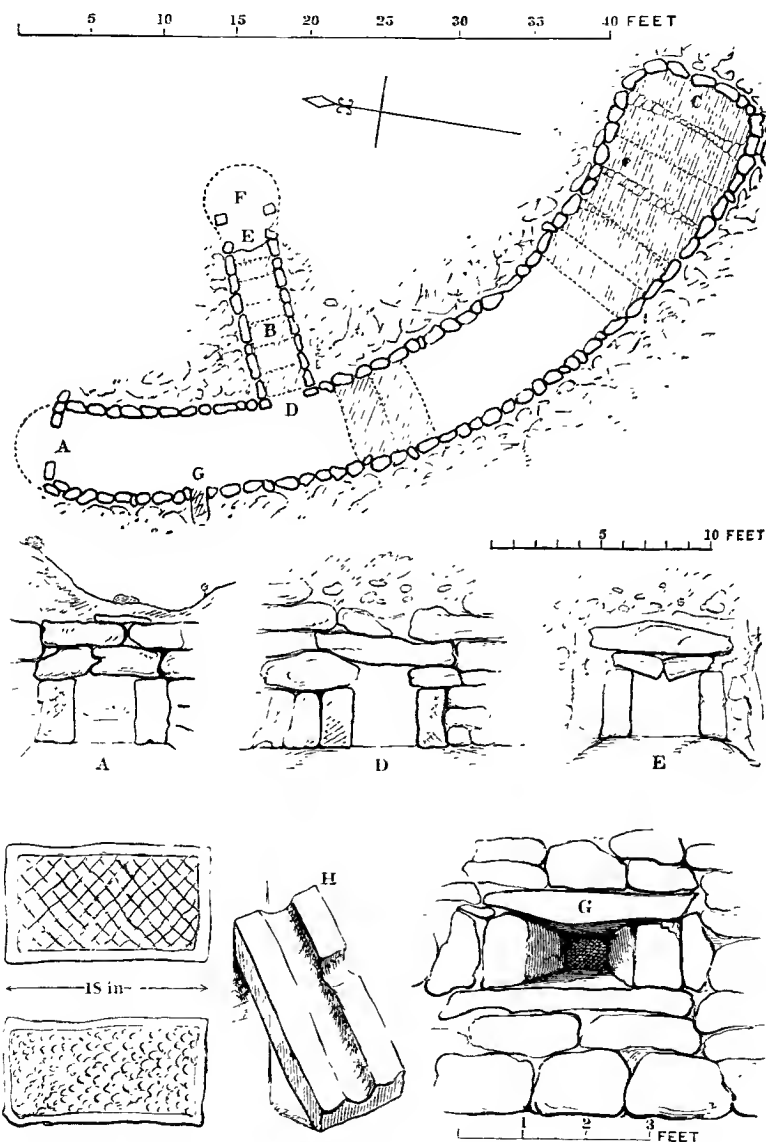


Fig. 7. Plan and Wall Elevations of Earth-house at Crichton.

The Crichton and Newstead weems prove by their construction that they did not exist prior to the arrival of the Romans in Scotland. Other weems show that they were occupied contemporaneously with the

presence of Romans in their neighbourhood, or very soon after the invaders had left. This conclusion is arrived at from the fact that they have been found to contain specimens of the red glazed ware known as "Samian." It did not really come from Samos, any more than Dresden

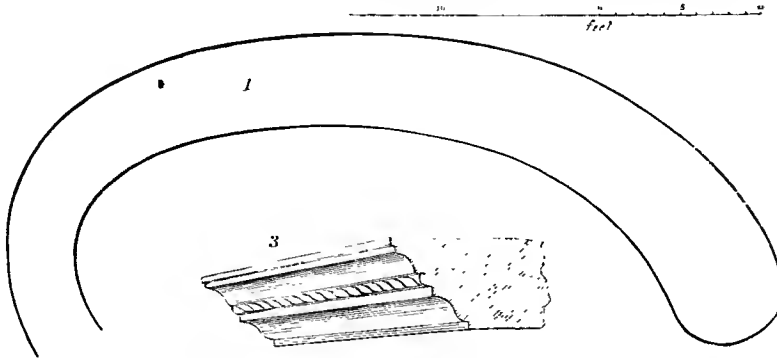


Fig. 8. 1, Plan of Earth-house at Newstead; 3, Stone, ornamented with rope moulding, therefrom.

china comes from China, but these two terms are convenient, although not strictly accurate. A good example of this Samian ware is the bowl found in one or other of the earth-houses at Pitcur, Forfarshire. One of these two earth-houses, that of Ballo-field, was discovered in 1863, and in it were some fragments of Samian ware which were presented to our Society by Mr Stewart Hood¹ on 13th April 1863. That earth-house seems to have been quite demolished. The other, situated on the farm of Pitcur, was not discovered until 1878. It is a little uncertain out of which of these earth-houses the Samian bowl (fig. 10) now preserved at Hallyburton House was obtained. Formerly I assumed that it came out of the one discovered in 1878, but subsequently there seemed reason to believe that it was found at Ballo-field. It is said to have been intact at the moment of its discovery, but got broken by rough handling. It was put together at the Museum under the supervision of Dr Joseph Anderson. An interesting point in connection with this bowl is that its presence intact seems to show that the earth-house in which it was found must have gone out of occupation soon after the Romans left Inchtuthil. If the earth-house continued to be occupied for a thousand years or more after that date, it is inconceivable that such a fragile vessel could have

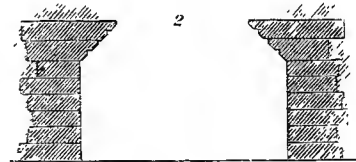


Fig. 9. Section of Newstead Earth-house.

¹ Mr Hood's contribution from Ballo-field consisted of "two small portions of embossed red Samian ware; portions of rusted iron; teeth and bones of cattle, found in an underground building or 'Pict's house,' at Pitcur, near Cnpar-Angus." (*Proceedings*, vol. v. p. 82.)

survived. The presumption, therefore, is that the occupants had left their home one day, perhaps to begin their summer wandering, and had never returned, being killed or captured. If, as is likely, they had closed the entrance or entrances for the purpose of concealment, the Samian bowl may have rested inside undisturbed for some fifteen centuries. It may be added that at least two other Forfarshire weems contained Samian ware—those at Fithie and Tealing.

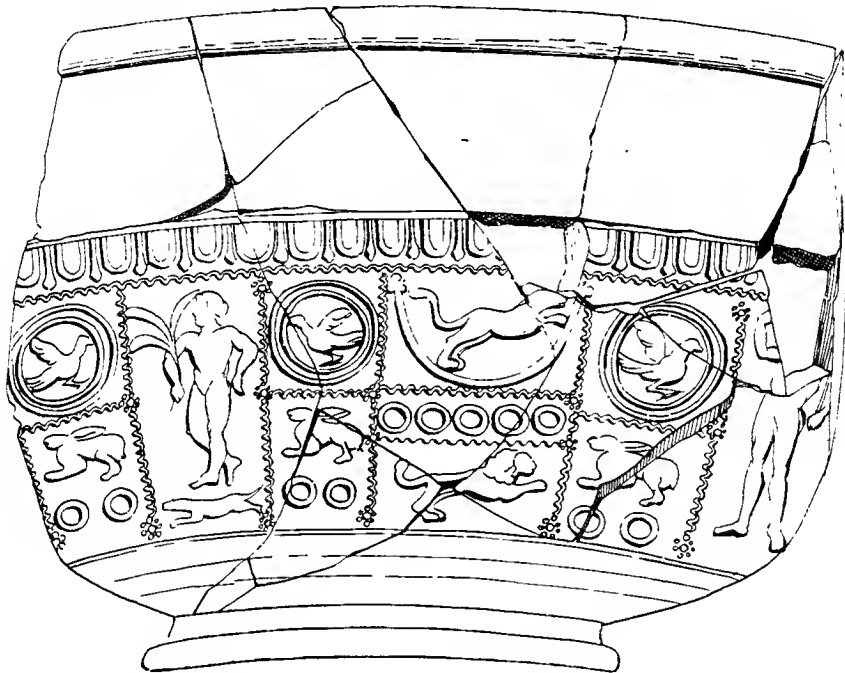


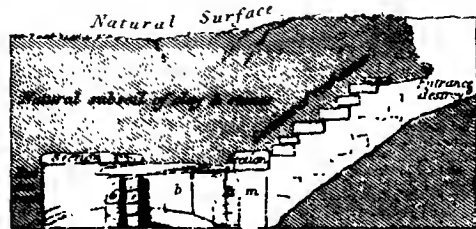
Fig. 10. Fragment of Samian-ware Bowl preserved at Hallyburton House.

The larger of the Pitcur earth-houses may be noticed here. It appears to be the largest specimen in the British Isles, its total length being about 190 feet. Judging from the portion still roofed, we may estimate its height throughout at 6 feet or more. The wide annexe that forms the western portion of the structure must have been roofed with wood. The reason for this assumption is that its great width forbids the idea that it was spanned with flagstones. Moreover, it has no traces of any kind of stone roof.¹

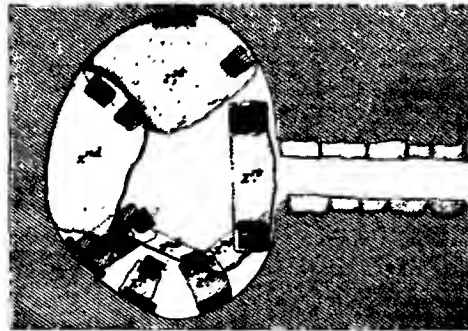
While noticing this important specimen of a Forfarshire earth-house, it is not out of place to give a passing glance at another earth-house in

¹ See my "Description of an Earth-house at Pitcur, Forfarshire," *Proceedings*, vol. xxxiv. pp. 202-214.

the same county, which is remarkable for being in a complete state of preservation. This is due to the forethought of a former Earl of Airlie. The discovery was made in or about the year 1794, and Lord Airlie, who had realised that two other earth-houses found on the same farm (the Barns of Airlie) had been utterly destroyed and their stones used for building material, had a clause inserted in the lease of this farm by



Section showing the East side, and the greatly inclined Gallery by which it is entered.



Plan of the first and second courses of the roof stones.

Plan & Section of subterranean Picts House situated in the Links of Pierowall

Fig. 11.

which the tenant and his successors were bound to protect the remaining specimen. A full and interesting description of this weem by W. J. A. Jervise, Brechin, was read to the Society on 13th June 1864.¹

It has been stated that the wide chamber at Pitcur must have been roofed with wood. But, although wooden roofs were probably not infrequent,² there was another method employed in roofing spaces which

¹ *Proceedings*, vol. v. pp. 352-355; plan and section opposite p. 302.

² There is a definite reference in the tenth-century Saga of Thorgils to the wooden balks supporting the roof of an earth-house in Ireland into which Thorgils and his men forced their way and encountered the inhabitants. Sir Daniel Wilson also refers to wooden roofs in earth-houses in his *Prehistoric Annals of Scotland*, 2nd ed., 1863, vol. i. p. 121.

were too broad for even the longest flagstone. This was by the erection of pillars and piers at intervals on the floor. These formed supports for flagstones of ordinary length, whose other end rested on the side walls. This method will be clearly understood by an examination of three Orkney specimens and one in South Uist.

The Orkney specimens are those at Pierowall (fig. 11), in the island of Westray; at Saverock, near Kirkwall; and at Grain, near Kirkwall. Illustrations of these are here shown. Orkney furnishes a fourth specimen at Yinstay, on the estate of Tankerness. The earth-house at

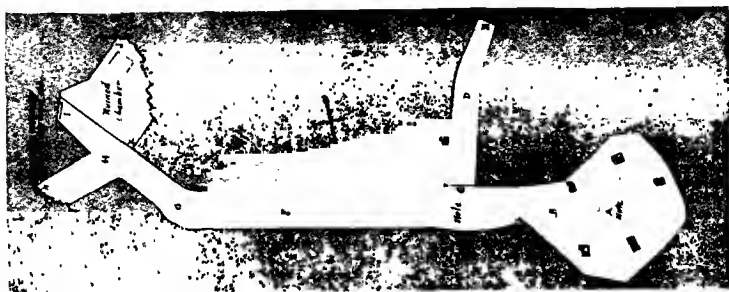


Fig. 12. Ground-plan of Earth-house at Saverock, near Kirkwall.

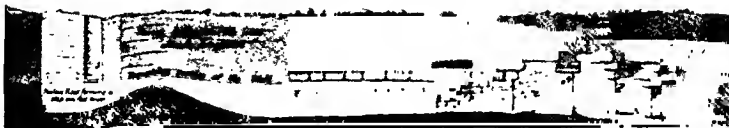


Fig. 13. Section of Earth-house at Saverock, near Kirkwall.

Grain appears to have been opened about the year 1827, after which the entrance became choked and covered over. It was reopened in 1857 by Mr Farrer and Mr Petrie, and again reopened in 1901 by Mr James W. Cursiter, who contributed a detailed description of it to *The Scotsman* of 19th October 1901, in the course of which he says: "The most remarkable feature of the chamber is the fact that the roofing is supported by four massive pillars, each pillar consisting of a single water-worn block of stone placed on end, supplemented when required by small ones placed on the top of them. Resting on these, with their other ends built into the nearest side wall, are other stones forming cap-brackets. Over these cap-brackets are placed heavy lintels lengthwise and crosswise of the building, these lintels serving to support the roofing, which consists of

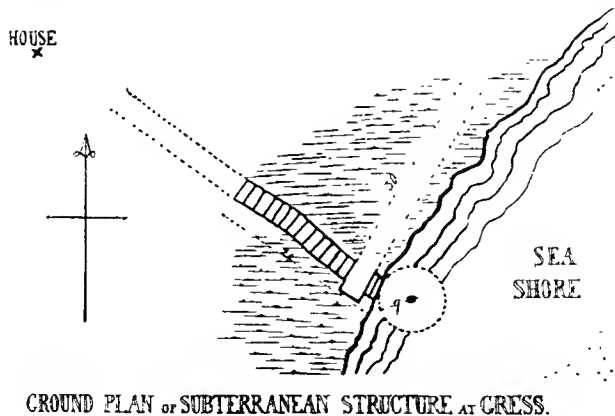
heavy water-worn stones, laid chiefly crosswise, some being laid flat and others on their edge."



Fig. 14. Interior of Pillared Earth-house at Grain, Kirkwall.

[From a photograph by James Tudor Candall, B.Sc.]

The South Uist specimen occurs at Usinish, the supports in this instance being piers, not pillars. This structure has been fully described



GROUND PLAN OF SUBTERRANEAN STRUCTURE AT GRESS.

Fig. 15.

by Captain Thomas (*Proceedings*, vol. vii. pp. 166-7). A similar structure existed at Gress, on the east coast of Lewis, north of Stornoway, having a central pier to support the roof of a circular building. An account of it

by Peter Liddle, Gress, appeared in the *Proceedings*, vol. x. p. 741. The adjoining gallery was described by me in a paper read before the Society on 10th December 1894, but the paper was not printed in the *Proceedings*.

It is interesting to add that the *Third Report and Inventory of Monuments and Constructions in the County of Caithness* (issued by the Royal Commission on the Ancient and Historical Monuments and Constructions of Scotland) contains the statement that in the parish of Latheron, in the south of Caithness, there are several "galleried dwellings" which have their roofing-space extended by means of pillars, in the same way as those of Pierowall, Saverock, Grain, and Yinstay. This information, which is one of the many results of Mr A. O. Curle's labours in that district, shows an architectural kinship between Caithness and the Northern and Western Isles.

The same method of supporting by means of pillars is found in the Balearic Isles, in connection with the same kind of structures. See illustrations at pp. 18 and 40 of Cartailhac's *Monuments primitifs des Iles Baléares*, Toulouse, 1892.

Other instructive varieties of the earth-house are found at Taransay, Harris; Seffister, Shetland; Eriboll, Sutherland; Belleville, near Kingussie; Broomhouse, Berwickshire; and Meall na h-Uamh, South Uist.

Dr John Stuart's observation, already quoted, that "in some cases the articles found would indicate that the occupation of these houses had come down to comparatively recent times," raises an interesting question. On the one hand, the existence of a Samian bowl, intact, demonstrates pretty clearly that the house in which it was found had been closed for about fifteen hundred years. On the other hand, the kind of articles referred to by Dr Stuart show a late occupation. Speaking of the above-ground structures of this nature in Ireland, Mr Thomas J. Westropp, M.R.I.A., remarks: "The continued use of the cahers, lisses, and raths is very interesting," and he enlarges upon this theme in the *Transactions of the Royal Irish Academy*, vol. xxxi. pp. 624-632. The subterranean retreats connected with such overground buildings are naturally included, and Mr Westropp cites the statement that in the year 1317 "even every man in a caher's souterrain" was summoned by Prince Donough to the fight of Corcomroe (*ibid.*, vol. xxxii. p. 158). The inference therefore is that the weems of that part of Ireland (County Clare) were in regular occupation at the time of the battle of Bannockburn. Casual occupation in more modern times may also be inferred, and there are definite cases of this by the Chouans of La Vendée, and by the Highland Jacobites in 1745-6. A very remarkable instance of an inhabited dwelling closely resembling, if not identical with, an earth-house was that visited by Dr McCulloch in the early part of the nineteenth century,

in the island of North Rona. McCulloch's account is quoted at length by T. S. Muir in his *Ecclesiological Notes* (Edinburgh, 1885), p. 86. I have myself seen traces of tinker occupation of such places in recent years. Captain Thomas gives similar evidence (*Proceedings*, vol. vii. p. 189).

It is impossible to understand the kind of life led in those subterranean abodes unless we study the similar life of the Arctic races, European, Asiatic, and American, whose dwellings have been so often compared with our 'earth-houses'. The comparison was made with great elaboration some fifty years ago by Sven Nilsson, and it has been repeated since by many others. The most recent of these is, I think, Mr Erskine Beveridge, who observes:¹—"The ancient Earth-Dwelling or 'Erd-House,'—often found in the Hebrides. . . . would seem to have had widely extended use. A recent visitor to Ungava Bay, Labrador, describes the Eskimo dwellings as of three kinds, the third, or Igloshuak, being 'simply an underground cellar or tilt. It is impossible to stand upright in such a residence, but the natives being small in stature experience no difficulty on this point. A subterranean passage about twelve feet long forms the principal entrance to the house, and it requires no small amount of gymnastic agility to wend one's way through. A square hole in the roof serves a like purpose.' This *Igloshuak* [remarks Mr Beveridge] appears strongly to resemble an Earth-House, both in size and arrangement."

Captain Scoresby describes a deserted Eskimo village visited by him in 1822, in similar terms.² The village was situated at the southern extremity of Jameson's Land, Scoresby Sound, East Greenland, and was composed, says Scoresby, "of nine or ten huts in close combination, besides many others scattered about the margin of the flat. . . . The roofs of all the huts had either been removed or had fallen in; what remained consisted of an excavation in the ground at the brow of the bank, about 4 feet in depth, 15 in length, and 6 to 9 in width. The sides of each hut were sustained by a wall of rough stones, and the bottom appeared to be gravel, clay, and moss. The access to these huts, after the manner of the Esquimaux, was a horizontal tunnel perforating the ground, about 15 feet in length, opening at one extremity on the side of the bank, into the external air, and, at the other, communicating with the interior of the hut. This tunnel was so low, that a person must creep on his hands and knees to get into the dwelling: it was roofed with slabs of stone and sods. This kind of hut being deeply sunk in the earth, and being accessible only by a subterranean passage, is generally considered as formed altogether under ground. As, indeed, it rises very little above the surface, and as the roof, when entire, is generally covered with sods,

¹ *Coll and Tivee*, Edinburgh, 1903, pp. x-xi.

² *Journal*, Edinburgh, 1823, pp. 208-214.

and clothed with moss or grass, it partakes so much of the appearance of the rest of the ground, that it can scarcely be distinguished from it."

A later writer, Captain Hall, gives a similar description of the older Eskimo dwellings:¹ "Formerly they built up an earth embankment, or a wall of stone about 5 feet high, and over this laid skeleton bones of the whale or spars of drift-wood, then on top of that placed skins of the seal

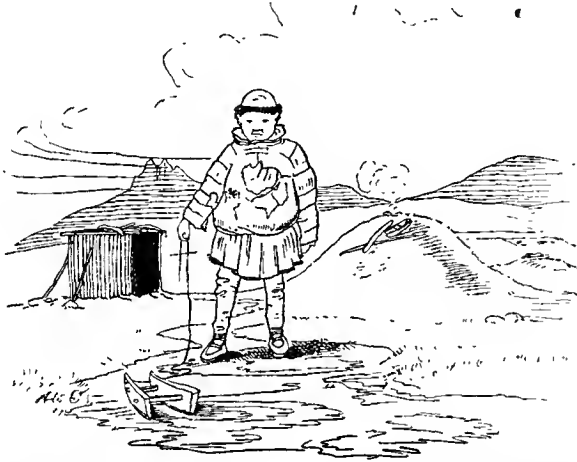


Fig. 16. Eskimo Earth-house, St Lawrence Island, Aleutian Isles.
Behind the figure of the boy is seen, on right, the mound-dwelling.
On left is the shelter above entrance to tunnel.

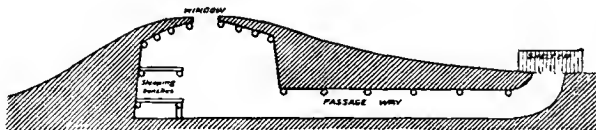


Fig. 17. Eskimo Earth-house, St Lawrence Island, Aleutian Isles.
Section: viewed from the opposite side.

or walrus. . . . The entrances were serpentine tunnels under ground, with side walls, and roofed with slabs of stone. To pass through them one is obliged to go on 'all-fours.'

Commenting on such descriptions, Nilsson observes: "It is not in Greenland only that we meet with dwellings constructed as here described; we find them amongst all Esquimaux tribes, wherever they are domiciled. They are invariably and everywhere characterised by the long, narrow, straight or curved, covered side gallery, pointing to the south or east, and by the chamber about five feet high."²

¹ *Life with the Esquimaux*, London, 1864, i. 130-1; ii. 111.

² *Op. cit.*, p. 136.

As far west as the Aleutian Islands, the North American Eskimos followed the same custom, although with architectural variations. "The natives, especially in their winter villages, were used to construct large, half underground habitations, often of extraordinary size. These were so arranged by internal partitions as to afford shelter to even as many as one hundred families. No fires were built in the central undivided portion, which was entered through a hole in the roof, provided with a notched log by way of ladder. In the small compartments each family had its own oil lamp, which, with the closely-fitting door of skins, and the heat of numerous bodies in a very small space, sufficed to keep them warm."¹

In more modern times the older fashions have been modified and improved upon. Examples of Eskimo dwellings in the Aleutian Isles

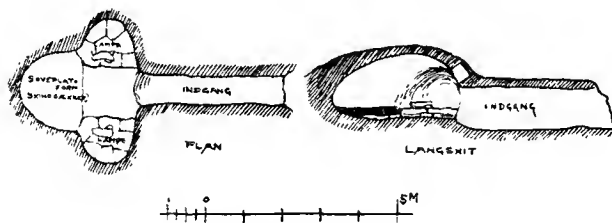


Fig. 18. Ground-plan and Section of a North Greenland Winter Hut.

and in North Greenland, here shown, demonstrate the close resemblance between the Eskimo mode of life and that of the dwellers in our earth-houses.

Kane, the Arctic explorer, writing in 1857, describes a specially small variety of Eskimo house. "The most astonishing feature," he says, "is the presence of some little out-huts, or, as I first thought them, dog-kennels. These are about 4 feet by 3 in ground-plan, and some 3 feet high." They were stone-built, of bee-hive shape, covered over with turf, and having a stone slab for a door. In spite of their small dimensions, they were used as dormitories in cases of emergency. It is clear that Kane did not regard it as possible that he and his comrades could have accommodated themselves within such narrow limits, and it is equally obvious that the natives of that region must have been small people. Eskimos have certainly the knack of packing themselves within very small compass, but a bedroom 4 feet long by 3 feet broad, with a height of 3 feet, demands an occupant or occupants of distinctly smaller size than that of ordinary Europeans.

¹ W. H. Dall, *op. cit.*, pp. 6-7. Nilsson quotes a similar description relating to Greenland, at p. 134: "separate cells, like the stalls in a stable," divided off by hide partitions.

Those who have visited the underground house on the Holm of Papa Westray, in Orkney, have seen little rooms there whose dimensions coincide almost absolutely with those of the Eskimo sleeping-places described by Kane. This fact serves to emphasise another link between the earth-houses of North America and of Scotland—their frequently

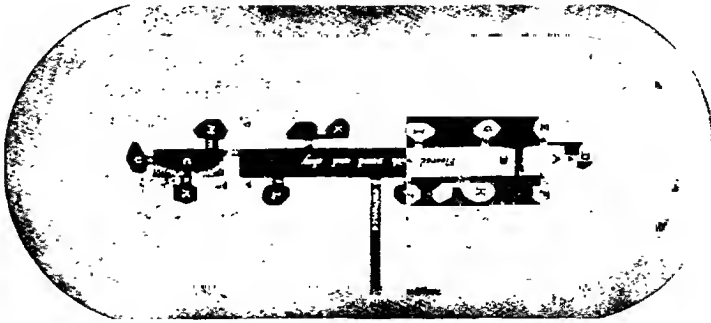


Fig. 19. Ground-plan of Earth-house at Holm of Papa Westray.



Fig. 20. Interior of Earth-house at Holm of Papa Westray.

small dimensions. This characteristic of our earth-houses has often been remarked upon. Of modern explorers of these archaic buildings one of the earliest was James Farrer of Ingleborough, M.P., who has left us a description of a specimen which he visited in 1855. It is situated in the islet known as the Calf, or Holm, of Eday, in the Orkney group. "The entire length of the building," says Farrer, "was found to be $16\frac{1}{2}$ feet; the entrance was very narrow, and a large stone was placed at the

mouth. There were four chambers, the largest being at the end of the building, and measuring 6 feet 2 inches long, 4 feet 6 inches in height, and 2 feet 6 inches wide. The doorway or entrance to this chamber was 1 foot 11 inches wide." After giving further measurements, Farrer observes:—"Whilst the size of the stones used in its construction is evidence of great personal strength on the part of the builders, the small and narrow rooms seem to indicate a diminutive race."¹ Other investigators have been impressed in the same way as Farrer. "What size could the people have been who crawled in through such rabbit holes as the passages of this eirde house are?" asks J. R. Tudor,² after describing in detail a similar mound-dwelling on the north-west side of Wideford Hill, near Kirkwall. Captain Thomas, R.N., who examined many of the Orkney and Hebridean souterrains, had previously (1867) asked the question that Tudor put independently in 1883. "What are we to think," asks Thomas, "when the single passage is so small that only a child could crawl through it?"³

In "An Account of some Souterrains in Ulster," read before the British Association at Leicester in 1907, an Ulster archæologist, Mrs Mary Hobson, writes to the same effect: "The entrances are small, but the tiny doorways between one chamber and another are even of more diminutive dimensions—great numbers being too small to admit the average-sized man—a person having to lie down flat in order to get through, and even then the width will not allow other than the shoulders of a woman or a boy to pass through." Captain Thomas, again, in his description of the Weem of Skalavat (*Uamh Sgalabhad*), in South Uist, remarks that the transported rock already referred to made the passage so narrow that, although some of his brother officers squeezed through, "I contented myself by looking through it." He adds: "This incomprehensible narrowness is a feature in the buildings of this period."⁴ There is nothing at all "incomprehensible" in this circumstance, the reality of which is testified to by these observers in Ulster, Orkney, and the Hebrides; not to bring in my own experiences. It is quite obvious that no sane race would construct buildings of this nature into which they could not enter, and the commonsense deduction is that the dimensions of the builders were proportionate with the dimensions of the buildings.

Those who have read the descriptions of the semi-subterranean houses inhabited by modern Eskimos must be struck by the recurrence of similar observations. The writer quoted by Mr Erskine Beveridge (*ante*, p. 191) says of the earth-houses of Ungava, Labrador: "It is impossible to stand upright in such a residence, but the natives being small in stature

¹ *Proceedings*, vol. ii. p. 156.

² *Proceedings*, vol. vii. p. 186.

³ *The Orkneys and Shetland*, London, 1883, p. 285.

⁴ *Proceedings*, vol. vii. p. 168.

experience no difficulty on this point." In passing, it may be noticed that this writer illustrates the attitude of other observers in Europe. He begins by saying that "it is impossible to stand upright in such a residence." But the next moment he contradicts himself by adding: "but the natives being small in stature experience no difficulty on this point." That is to say, it is perfectly possible to stand upright in an Ungava earth-house, provided one belongs to the race that built the earth-house. The "impossible" of that writer is a pendant to the "incomprehensible" of Captain Thomas. In both cases it is artlessly assumed that the average modern European represents mankind, in the present and in the past. When the fact is once grasped that there are and were races of distinctly smaller dimensions than the average European, then the "impossible" and "incomprehensible" features vanish altogether.

Kindred evidence from Greenland is furnished by Dr Nansen, who tells of a fat Danish storekeeper who stuck fast at a difficult point in the entrance-gallery of an Eskimo house. He was, of course, crawling along on all-fours. "There he stuck, struggling and roaring, but could not advance, and still less retreat. In the end, he had to get four small boys to help him, two shoving behind, and two, from within the house, dragging him in front by the arms. They laboured and toiled in the sweat of their brows, but the man was jammed as fast as a wad in a gun-barrel, and there was some thought of pulling down the walls of the passage in order to liberate him, before he at last managed to squeeze through. If I remember rightly," adds Dr Nansen, "a window had to be torn down in order to let him out of the house again." There is another story of a missionary who, in his domiciliary visits to his Eskimo flock, had to be dragged along the entrance passage in a sack, in which he lay straight and rigid.

From the evidence cited, it appears that Ireland and Scotland once contained a race of people whose habitations, in character and dimensions, were similar to those of Eskimos. Nilsson, who exerts himself to show the same analogy in Scandinavia, is strongly opposed to the idea that this denotes any racial affinity. Buffon, on the other hand, believes, on these and other grounds, that the Arctic races of America, Asia, and Europe were all akin. It is, of course, understood that the connection is by way of Siberia, and not across the North Atlantic. The late Charles H. Chambers, a member of the Anthropological Institute of Great Britain and Ireland, concisely states the conclusion which he had arrived at, in this matter, as follows: "I believe the race which inhabited the northern shores of Europe to have been akin to the Laps, Fins and Esquimaux, and the Pickts or Pechts of Scotland, and to have given rise to many of the

dwarf, troll, and fairy stories extant among the Sagas and elsewhere." Chambers makes this statement in the *Anthropological Review* for 1864, but he does not there state the reasons which lead him to this deduction. It is probable that he was influenced to some extent by the discovery made in the island of Burray, Orkney, in the previous year, of a group of twenty-seven human skulls, some of which were pronounced to be "of the Esquimaux type, short and broad."¹ Not unlikely he was familiar with the fact that, as recently as the seventeenth century, the Church of Burray possessed a skin kayak belonging to the race of Finns, or Finn-Men who formerly frequented the waters of Orkney and Shetland.² Like the small earth-houses, these skin-canoes are constructed for a small people, and the specimen preserved in the Anthropological Museum in Aberdeen University could not be used by the average-sized Briton of the present day.³ Much might be said in connection with Chambers's closing words, but that could not be done without extending this paper to an extravagant length.⁴

¹ Wilson's *Prehistoric Annals of Scotland*, 2nd ed., 1863, vol. i. p. 120.

² For fuller accounts of these people I would refer to my "Notes on a Finnish Boat preserved in Edinburgh," *Proceedings*, vol. xxiv., and to "The Aberdeen Kayak and its Congeners," *Proceedings*, vol. xlv.

³ This detail is explained by me in an article on "Dwarf Skeletons in Great Britain" in *The Scotsman* of 14th July 1914.

⁴ It may be added that Chambers was probably acquainted with the statement made in Tulloch's *De Orcadibus Insulis* in 1443, and subsequently quoted by modern writers from Barry onwards, to the effect that the Orkneys contained a population of "Peti" prior to the Norwegian colonisation, and that these "Peti," who were of very small stature, were accustomed to take refuge in little underground houses.

MONDAY, 14th May 1917.

THE HON. JOHN ABERCROMBY, LL.D., President,
in the Chair.

A Ballot having been taken, the following was duly elected a Fellow:—

JOHN WARRACK, 13 Rothesay Terrace.

A bequest by the late William Steele, F.S.A.Scot., of the following objects was intimated:—

Axe of Serpentine, measuring $2\frac{1}{8}$ inches in length, $1\frac{3}{4}$ inch in breadth across the cutting edge, $\frac{7}{8}$ inch across the butt, found in the debris on taking down an old thatched cottage at Gattonside, Melrose.



Fig. 1. Socketed Axe of Bronze from Cauldshiels Loch, Roxburghshire.

Axe of Indurated Claystone, $2\frac{1}{8}$ inches in length, imperfect at the butt, $1\frac{7}{8}$ inch in breadth across the cutting edge, 1 inch in breadth at the butt, from Linton Burn Foot, on the Kale, Roxburghshire.

Axe of Indurated Claystone, $2\frac{1}{8}$ inches in length, $1\frac{3}{4}$ inch in breadth across the cutting edge, $\frac{13}{16}$ inch in breadth at the butt, found in the bed of the Leet, on Hirsell Estate, near Coldstream, Berwickshire.

Perforated Hammerstone of Gabbro, $5\frac{5}{16}$ inches in length, $2\frac{5}{8}$ inches in breadth across the centre, found on Craigend Farm, parish of Stow, Midlothian.

Implement of Quartzite, imperfect, $3\frac{5}{8}$ inches in longest diameter, with an indented hollow on one face $1\frac{7}{16}$ inch in diameter, found on the surface of a field a few yards east of the burn and 20 yards south of the road at Hillend, Markland Farm, New Cumnock, Ayrshire.

Half of an implement of Basalt, $3\frac{3}{8}$ inches in longest diameter, with a slightly indented hollow on each face, found in a field road, Halton Castle, Northumberland.

Ball of Ironstone Clay, $1\frac{1}{4}$ inch in diameter, found in the Moorfoot Burn, New Cumnock.

Socketed Axe of Bronze, 3 inches in length, $2\frac{1}{4}$ inches in breadth across the cutting edge, with a loop on one side and a moulding beneath the rim

of the socket, from which depend three vertical relief markings, much weathered, found on the margin of Cauldshiels Loch, Roxburghshire (fig. 1).

Circular Button of Jet, $1\frac{1}{4}$ inch in diameter, flat on one side and convex on the other, pierced with a V-shaped perforation on the flat side, and ornamented on the convex surface with thirteen small punctulations roughly parallel to the edge, found in cutting a drain on Marshalmark Hill, New Cumnock.

Axe of Igneous Rock, $3\frac{11}{16}$ inches in length, butt imperfect, $1\frac{3}{8}$ inch in breadth across the cutting edge, from Connemara, Ireland.

Axe of White Flint, chipped but unpolished, $4\frac{7}{8}$ inches in length, from the Thames Valley.

The purchase for the Library was announced of:—

The Ancient Cross Shafts at Bewcastle and Ruthwell, by the Right Rev. G. F. Browne, D.D. (C. & O.), D.C.L., LL.D. Cambridge, 1916. 4to.

The following Communications were read:—

I.

THE CROSSES OF KIRKMADRINE: DISCOVERY OF THE MISSING THIRD STONE. BY THE RIGHT HON. SIR HERBERT E. MAXWELL, BART., F.R.S., D.C.L., LL.D., F.S.A. SCOT.

Among the many valuable services rendered to archæology by the late Sir Arthur Mitchell, one of the most notable was his discovery of the inscribed and sculptured stones at Kirkmadrine, Wigtownshire. There is a tinge of romance in the paper which he contributed to the *Proceedings* of the Society in 1872, describing how he found two pillar crosses applied to the humble purpose of gate posts (fig. 1), and was tantalised by information about a third, which had vanished, but of which Dr Mitchell was shown a drawing. It was in the early 'sixties that, having occasion to visit the parish of Stoneykirk,¹ he wandered into the ancient graveyard of Kirkmadrine.

“When climbing over the gate, I observed that there was a figure and an inscription on the stone pillar on which it was hung. The figure I recognised as one which I had seen in the Catacombs at Rome, and the

¹ The parish of Stoneykirk absorbed the parishes of Kirkmadrine and Clayshant after the Reformation. The modern form of the name disguises the dedication to St Stephen. It occurs as Stevenskirk in Court of Session papers in 1725, but was usually known as Steenie's Kirk, which, in the old pronunciation, sounded like “staney,” *i.e.* full of stanes, and English surveyors and map-makers made it appear genteel by altering it to Stoneykirk.

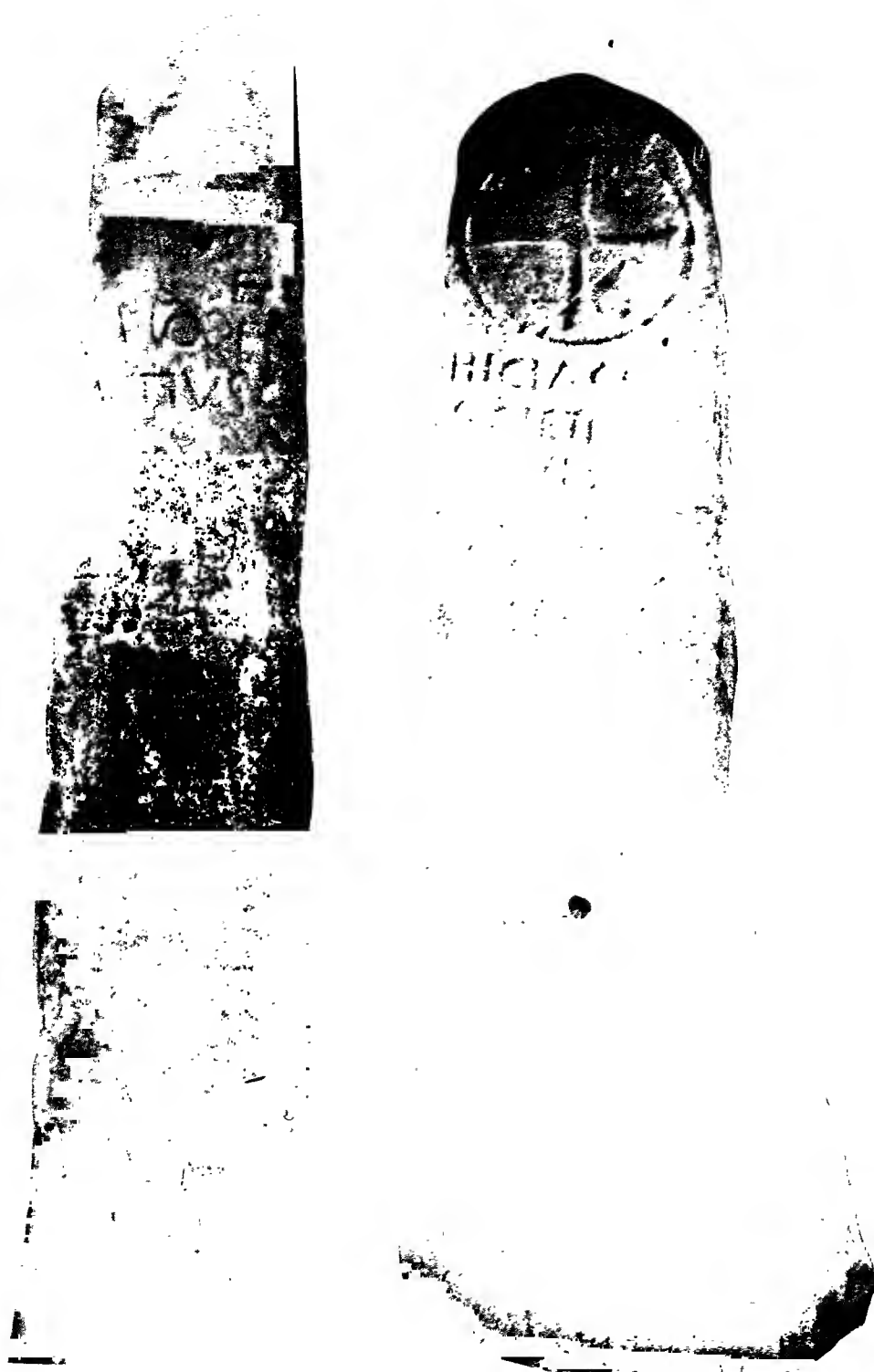


Fig. 1. Pillar Crosses formerly used as Gate Posts in the Kirkyard.

inscription, which was easily read, appeared to me of remarkable interest. I knew enough of our sculptured stones to be immediately aware that I had fallen on something which had no counterpart anywhere else in Scotland. . . . I found that the other pillar, to which the gate fell, had a similar figure on it, and also what appeared to be a continuation of the inscription."¹

Dr Mitchell then searched for other objects of interest and inquired diligently of the neighbouring farmers whether they had ever seen or heard of carved stones in the old graveyard. He recovered a broken sculptured slab (fig. 2), which had been built into the kirkyard wall as a "through stane" or stepping-stone, and he was told that there had been once a third inscribed cross, not unlike the pair which he had found in the gate pillars; but this, it was said, had been carried off to form a lintel in a farmhouse, and could not now be traced.

In the following year² Dr Mitchell returned to Kirkmadrine, determined to exhaust all means which might lead to the recovery of the vanished stone. "Remembering that I had found the so-called reindeer stone as the cope of a pigstye, I thought no building too mean for examination." He did, indeed, find another fragment of sculpture built into the wall of the kirkyard (fig. 3), but it was not the missing cross.

"I then enquired whether there was no old person in the parish who had shown an affection for the relics of a bygone time, but I heard of no one. Mention, however, was often made of Mr William Todd, an old schoolmaster in the neighbouring parish of Kirkmaiden, who had been a correspondent of the late Mr M'Diarmid of the *Dumfries Courier*, and who was then living on his pension in Drummore. Next morning I had an opportunity of calling on him, and I asked if he had ever seen, and if he remembered anything of, the two stones at Kirkmadrine. 'There are three,' he at once said: 'I have often seen them, and remember them well.' I assured him that there were only two now, but told him I had heard from others of a third. After some reflection, he assured me that what I had been told was correct: that he had once—about fifty years ago—made a drawing of them, and that it was possible he had the drawing still in his possession. An old desk was sent for, and among the papers it contained there was one folded like a letter, brown and



Fig. 2. Slab from Kirkyard Wall.

¹ *Proc. Soc. Ant. Scot.*, vol. ix, pp. 568, 569.

² Sir Arthur Mitchell has not recorded the year, but we know it must have been anterior to 1867, when the second volume of Dr John Stuart's *Sculptured Stones of Scotland* was published, containing plates and description of the Kirkmadrine crosses.

stained with age, and on this we found the drawings of the three stones, which are exactly copied in figs. 1, 2, and 3 of Plate XL. Fig. 3 represents the missing stone, which, like the others, has the well-known monogram enclosed in a circle, and below it the words INITIUM ET FINIS (fig. 4).

"These drawings are rude, but we may fairly infer the substantial accuracy of the sketch of the third and lost stone from the accuracy of the sketches of the other two, which we can still compare with the originals, as carefully depicted in figs. 1 and 2 of Plate XXXIX. The only mistake Mr Todd appears to have made is in substituting an R for an M at the end of INITIUM. I assume this to be an error in his drawing."



Fig. 3. Slab from Kirkyard Wall.

Dr Mitchell's discovery, happening just in time to enable Dr John Stuart to describe and illustrate the two Kirkmadrine crosses,¹ and coinciding with the recognition of the Peter Stone at Whithorn,² attracted considerable attention owing to a peculiar feature common to all these three crosses, but unknown elsewhere in Scotland, and indicative of a very high ecclesiastical antiquity. This feature is the Chi-Rho monogram, originally displayed on the *labarum* or standard of the Emperor Constantine.³ The lonely little graveyard of Kirkmadrine became quite a recognised place of pilgrimage for antiquaries, but more than half a century had to pass before any trace of the missing third cross was forthcoming. It now turns out that it had not travelled far,

only about a mile down the road to the United Free Church Manse of Stoneykirk, where, during the summer of 1916, it was recovered, in the manner described as follows, by Mr J. Wilson Paterson, A.R.I.B.A., of H.M. Office of Works:—

¹ *Sculptured Stones of Scotland*, vol. ii. p. 35, plate lxxi.

² *Ibid.*, p. 51, plate lxxvii.

³ "The monogram called the chrisma occurs frequently in the catacombs enclosed within a circle, which is thus explained by an inscription found at Milan:

'Circulus hic summi comprehendit nomina regis,
Quem sine principio et sine fine vides.'

It continued to be used on sarcophagi till about the end of the seventh century. It occurs fourteen times in Britain. . . . The chrisma does not occur in Ireland." (*Scotland in Early Christian Times*, by Joseph Anderson, LL.D., second series, p. 252, note.)

"During the past summer the Kirkmadrine inscribed stone, No. 3, so called in *Early Christian Monuments of Scotland*, by J. Romilly Allen, was fortunately rediscovered. While executing certain repairs to the gate-pillars of the Stoneykirk United Free Church Manse, the local mason, Mr Robert Nelson, came across the stone in the centre of the pillar. Unfortunately, the stone had been broken by him before he discovered its importance. The stone had been built into the gate-post and used as a bonder, the crooks of the gate being sunk into the bottom of the stone.

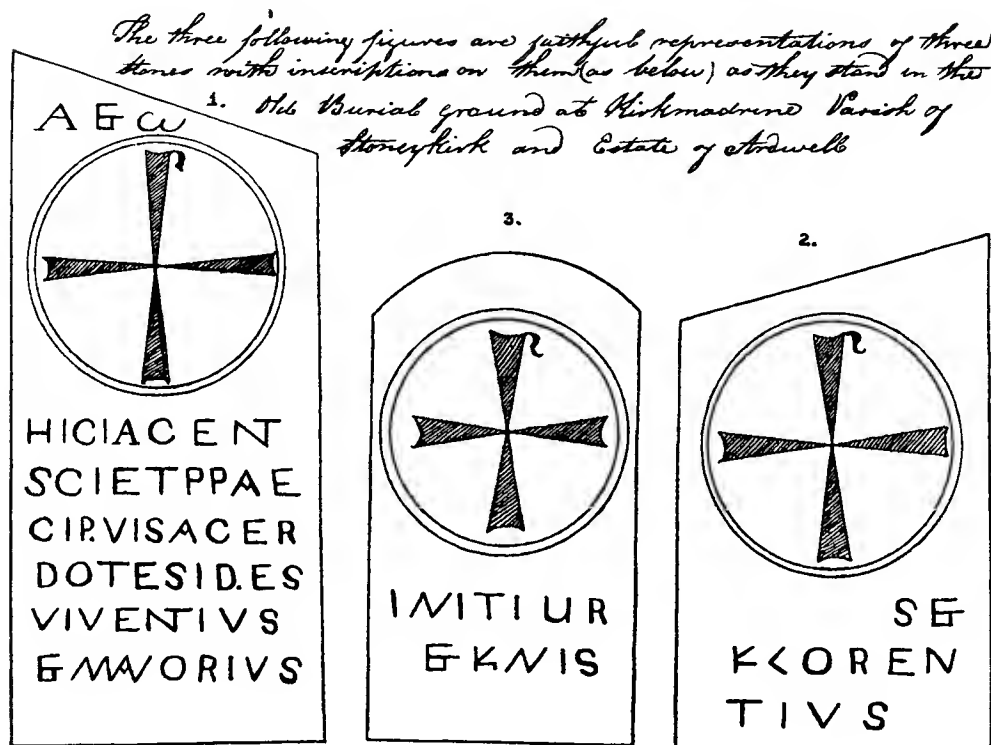


Fig. 4.

(Mr William Todd's drawing, executed about A.D. 1820.)

The stone had been set in the pillar with its inscribed face downwards and the head towards the centre of the pillar. These pillars were erected at the time of the Disruption, and consequently, although search has been made throughout the district for the stone, no trace of it could be found. I attach a photograph and drawing showing the position of the stone in the pillar.

"The stone (fig. 5) is considerably smaller than the other two already in the porch at Kirkmadrine Church; it measures only 3 feet 3 inches high by 8½ inches wide and is 9 inches thick, widening at the base to 12 inches thick. The incised circle (8½ inches diameter) and the Chi-Rho are well cut, and the inscription INITIUM ET FINIS, with the exception of the letter M, is easily decipherable. The letter M being cut at the extreme

edge of the stone may account for its bad form and for its being given as R in Mr Todd's drawing. The stone is of a local bluish-gray whinstone of similar character to the other two, while the lettering is also similar. The letters vary in size, but average about 2 inches in height. The stone has now been repaired and the fractured pieces cemented together and the whole set up with the others in the porch.

"The attached drawings and photographs were taken from the stone before the repairs."



Fig. 5. The missing Sculptured Slab, now recovered.

The first thing to be noted in connection with the recovery of the third Kirkmadrine Cross is the gratifying evidence it bears to the intelligent interest in objects of antiquity which has been diffused and stimulated of late years among working-men and their employers: so that we are not likely to be distressed in the future, as we have often been in the past, by hearing of the heedless or wanton destruction of valuable relics of the past. All the more reason, then, to pay a tribute of gratitude to the memory of William Todd, the parish schoolmaster, who, about one hundred years ago, took reverent note of objects which were then regarded with popular indifference or contempt; for it is through his fidelity as a draughtsman that Sir Arthur Mitchell obtained knowledge of the character of the missing stone and Mr Robert Nelson, the mason, was enabled to recognise it when at last it was found.

The stones themselves have been described by Mr Romilly Allen as indurated schist,¹ but I think Mr Wilson Paterson more accurately describes them as slabs of Lower Silurian greywacke, the prevailing rock of the district. I confess, however, that I have not examined them microscopically. Either stone is very intractable material for the sculptor, who has, however, incised the crosses with masterly precision, and the inscriptions are very fair examples of Anglo-Roman capitals. We may be thankful for the hardness of the stone, which has been the means of preserving the figures and inscriptions through so many centuries of neglect. Had there been freestone at

¹ *Early Christian Monuments of Scotland*, p. 495.

hand to work on, no doubt it would have been chosen, in which case the frost and storms of a thousand winters would have long since obliterated all trace of handiwork.

So much attention has been devoted to the probable age of the Kirkmadrine crosses and the Peter Stone at Whithorn (fig. 6) (the four stones may safely be assumed to be of coeval workmanship) that I hesitate to add anything to what has been written by men of such caution and erudition as Sir Arthur Mitchell, Dr Joseph Anderson, Mr Romilly Allen and Dr John Stuart: but it may be noted as suggestive of the origin of these monuments that the Chi-Rho monogram first appears in the catacombs of Rome in connection with inscriptions executed early in the fourth century, and that it occurs in France only on monuments dated between A.D. 377 and 540.

"The symbols and formulæ of Christian monuments appear in Rome about a century earlier than in Gaul, and the natural inference is that, if they are a century later in Gaul than in Rome, they will be still later in Britain, assuming of necessity that their progress westward continued to be gradual. We can therefore say with something like certainty that this monument [the Peter Stone] bearing the chrisma cannot be earlier than the end of the fourth, and that it may be as late as the latter part of the sixth century."¹

To this most reasonable hypothesis I would venture to add that the westward progress of Christian symbolism may have been accelerated by the mission of Bishop Ninian, who, if we may accept Bæda's statement (and I know of no reason to question it), came straight from Rome to Tours, where he remained a while with Bishop Martin and, on leaving, took with him certain masons to build his missionary church at Whithorn.² This we know to have taken place in the last decade of the fourth century, for Bishop Martin died in 397, while Ninian was busy building the Candida Casa. It seems, therefore, not only possible, but attractively probable, that "the holy and distinguished priests Viventius, Mavorius, and Florentius" were actually companions of Bishop Ninian, perhaps his masons, whom he may have consecrated as priests after they had finished the building at Whithorn. Nay, may not one of them

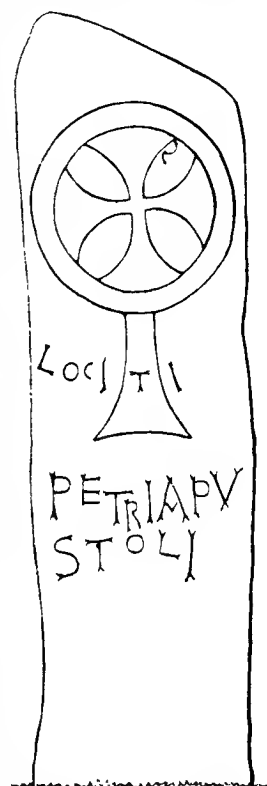


Fig. 6. The "Peter Stone," Whithorn.

¹ *Scotland in Early Christian Times*, second series, p. 253.

² "Cementarii quos secum adduxit." (Ailred's *Vita Niniani*, cap. iii.)

have been that very priest of whom we read in the fifth chapter of Ailred's *Vita Niniani* as having been appointed by the bishop to the cure of a parish,¹ and whom Ninian, by the exercise of his miraculous power, is stated to have defended successfully against the woman who accused the said priest of being the father of her bastard?

The hypothesis that the priests commemorated by these stones were contemporaries of Bishop Ninian and co-operated with him in converting the Picts of Galloway seems to be strengthened by the fact that these Picts relapsed into paganism after Ninian's death, and appear to have remained pagans even after the province had passed under dominion of the Angles of Bernicia (Northumbria), until at last the Anglian bishopric of Candida Casa was founded about A.D. 730.² By that time, three hundred years after the death of Ninian, it is highly improbable that local sculptors would revert to the archaic cross with the Chi-Rho monogram. It is to that date and the two following centuries that we may assign the numerous sculptures of Celtic design which remain in Galloway. Moreover, during the brief and precarious existence of the Anglian bishopric of Candida Casa, which came to an end in A.D. 803, there were five holders of the see all with either Celtic or Anglian names, which William of Malmesbury, though writing in Latin, makes no attempt to cast into Roman form, as was done to the names on the Kirkmadrine stones.

"Him [Pechthelm] there followed," says he, "Frithewald, Pectwine. Ethelbriht, Beadulf, nor do I find that there were any more, because the bishopric soon came to an end, on account of its being, as I have said, the most remote part of the territory of the Anglians, and most exposed to devastation by Scots or Picts."³

If, then, it may be assumed that the work on these stones carries us back to the beginning of the fifth century, it seems a fair opportunity for an attempt to remedy the confusion which has taken place about the name Kirkmadrine.

There were of old two parishes of that name in Wigtownshire, one, the site of the sculptured stones presently under notice, now united to Stoneykirk; the other, about four miles from Whithorn, now united to Sorbie parish. There were also two parishes called Kirkmaiden, one of which, extending from the boundaries of Stoneykirk to the Mull of Galloway, is still intact; the other now united to Glasserton parish. Both

¹ "Cui curam parrochie pontifex delegaverat." (Ailred's *Vita Niniani*, cap. v.)

² "In the province of the Northumbrians, where King Ceolwulf reigns, four bishops now preside: Wilfred in the church of York, Ethelwald in that of Lindisfarne, Acca in that of Hexham, Pechthelm in that which is called Candida Casa, which, from the increased number of believers, has lately become an episcopal see and has him for its first prelate." (Bæda's *Ecclesiastical History*, B. v., cap. 23.)

³ William of Malmesbury's *Gesta Pontificum Anglorum*, B. iii., cap. 118.

the suppressed parishes of Kirkmadrine are written Kirkmadin by Chalmers,¹ under the erroneous belief that the name was simply a corruption of Kirkmaiden. He cannot have heard the names pronounced, else he would have learnt that in Kirkmaiden, a dedication to the Irish virgin Medan,² the stress is on the penultimate syllable, whereas in Kirkmadrine it is on the last syllable. Dr John Stuart was the first to suggest that the dedication of Kirkmadrine was to a Gaulish saint Mathurinus, who died about A.D. 387, several years before Ninian paid his visit to Bishop Martin at Tours.³ Bishop Forbes quotes Dr Stuart's suggestion, but observes that "it may be that this Madrine is more probably Medran, of which name there are instances at June 6 and June 8 in the Martyrology of Donegal."⁴ I trust that I may not be deemed presumptuous if I remark that this is pure guesswork, wherefore it may be permissible to make another guess. The name is obviously in the Gaelic language; for although the prefix to a Celtic church name is usually Kil-, representing the locative case of the word *ceall*, literally a cell, but commonly a church, this is often replaced in Galloway, long subject to Anglian rule, by Kirk-; e.g. Kirkcudbright, Kirkmichael, Kirkpatrick, Kirkmaiden, etc. Now Bishop Ninian dedicated his principal church to him whom he revered as his spiritual father—Bishop Martin of Tours. Martin in Gaelic is written Matrainn, and a church dedicated to Martin would receive the name Kilmatrinn, or, according to Gallovidian usage, Kirkmatrinn. I submit that the two churches named Kirkmadrine, one of them within five miles of St. Martin's church at Whithorn, were more likely to be dedicated to Bishop Martin than to Mathurinus, of whom nothing is known in Celtic hagiology, or to the obscure individual of whose existence we are aware only through a passing reference in an Irish Martyrology.

¹ *Caledonia*, iii. 439.

² *Breviarium Aberdonense*.

³ *Sculptured Stones of Scotland*, vol. ii., part 1, p. 36.

⁴ *Kalendar of Scottish Saints*, p. 382.

II.

NOTES ON THE CULROSS PSALTER IN THE ADVOCATES' LIBRARY.

By W. K. DICKSON, LL.D., F.S.A. Scot.

The manuscript known as the Culross Psalter (Advocates MS., 18. 8. 11) has now been in the Advocates' Library for more than two hundred years. In the seventeenth century it belonged to the collection of Sir James Balfour of Denmilne and Kinnaird, the well-known antiquary and collector, who was Lyon King-of-Arms to Charles I. It was acquired by the Faculty of Advocates at the sale of his library, which took place in 1699, after the death of his brother, Sir David Balfour—the sale at which the foundation of the Faculty's collection of Scottish MSS. was laid. It is of special interest as being the earliest example which the library possesses of an illuminated manuscript which is known to have been written in Scotland.

The Book of Psalms, in various forms and in many languages, has always been the most widely used of all devotional books. The typical mediæval Latin Psalter is thus described by Mr J. A. Herbert (*Illuminated Manuscripts*, 1911, p. 327):—

“The Psalter contains the 150 Psalms, usually preceded by a Calendar and followed by the *Te Deum* and other Canticles, a Litany of Saints, and prayers; often, too, by Vigils of the Dead. Illuminated Psalters occur as early as the eighth century, and from the eleventh to the beginning of the fourteenth they form by far the most numerous class of illuminated manuscripts. Several pages at the beginning are filled in some copies, especially in the thirteenth century, with scenes from the life of Christ. The initial ‘B’ of Psalm i. is always lavishly decorated, and so are the initial letters of the principal divisions of the Psalter. These divisions vary with country and date; in the majority of thirteenth and fourteenth century manuscripts they occur at Psalms xxvi. (*Dominus illuminatio mea*, usually illustrated by a miniature of David looking up to God and pointing to his eyes, enclosed within the ‘D’); xxxviii. (*Dixi custodiam*, David pointing to his lips); lii. (*Dixit insipiens*, a fool with club and ball, either alone or before King David); lxviii. (*Salvum me fac*, David up to his waist in water, appealing to God for help; or sometimes Jonah and the whale); lxx. (*Exultate Domino*, choristers singing); cix. (*Dixit Dominus*, the Father and Son enthroned, the Dove hovering between them).¹

¹ The numbering of the Psalms is the old numbering of the Vulgate, in which Psalm ix. and x. of the Hebrew Psalter, and of the Authorised Version, are reckoned as one and numbered ix., and the subsequent numbers are altered accordingly.

The more sumptuous copies have a great wealth of additional illustration, from scriptural, hagiographical, and other sources."

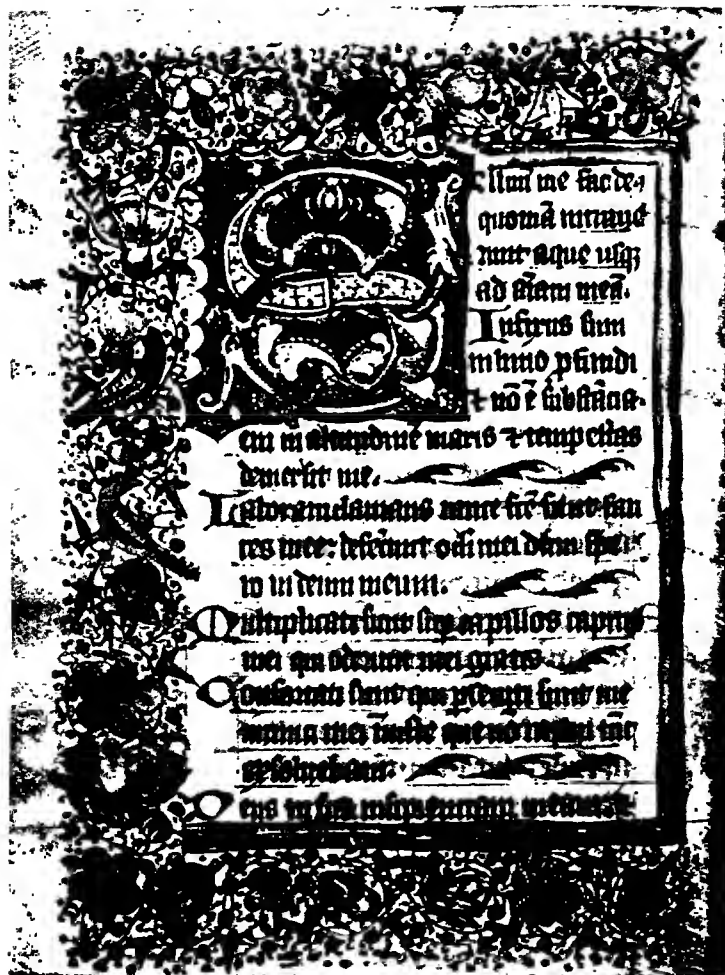
The Culross Psalter conforms to this general type, though artistically it is of quite humble pretensions. It is a small volume measuring $6\frac{1}{4}$ inches by $4\frac{3}{4}$ inches, and consists of 203 leaves of vellum, 18 lines to a page. The collation is:—Calendar in one gathering of 6: the rest as follows: a^8 , $b-m^{10}$, n^8 , opq^{10} , r^8 , s^{10} , tv^8 . Two leaves are missing after ff. 12 and 16 respectively. The volume is in a modern binding of dark red niger morocco.

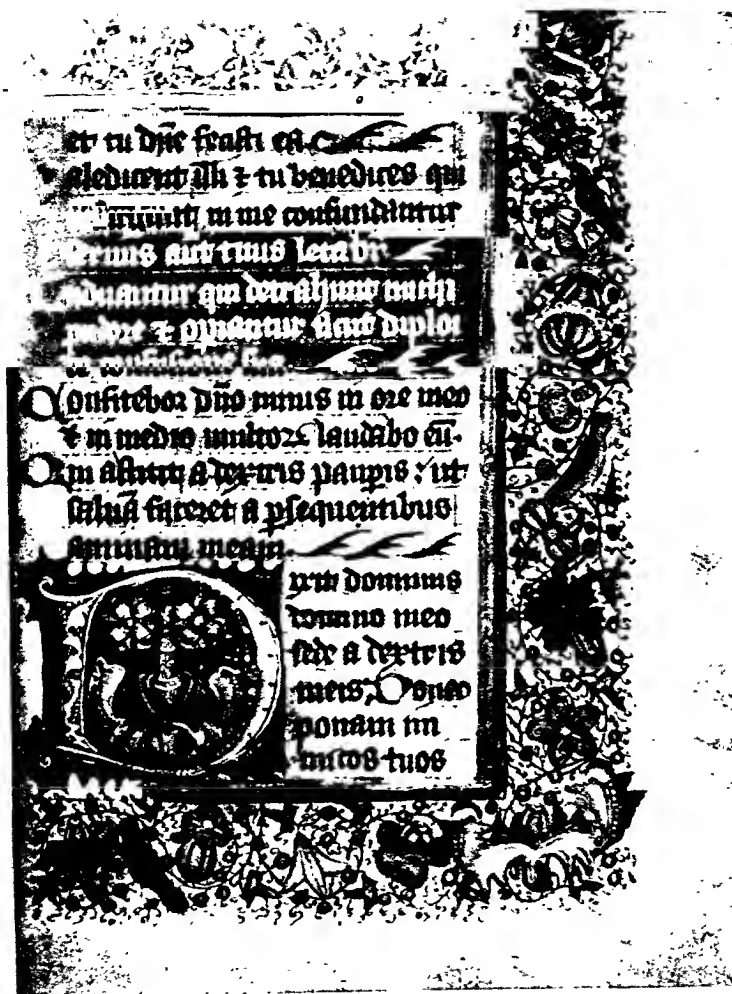
The volume contains the Calendar in red and black; the Psalms, the *Benedicite omnia opera*, *Benedictus*, *Magnificat*, and *Nunc Dimittis*; various prayers; the Athanasian Creed, Litany of Saints, and Vigils of the Dead.

On the front flyleaf is written in Sir James Balfour's handwriting: "*Psalterium Ricardi Marishell Abbatis de Culenrosse vel Culros in A^o 1305.*" Clearly, however, the book is of much later date. At the end of the Calendar is the following inscription in gold letters:—"Me fieri fecit Ricardus Marchel quōdā abbas de Culēros quē d's salvet hic et in erum." In the list of abbots of St Serf's, Culenros, given in the Scoti-Monasticon, the name of Richard Marshall appears with the note, "Degraded: died 1470." The MS. is written in the ordinary book-hand of the fifteenth century, and the decoration is the characteristic floriated work of the period.

The Calendar is printed in Bishop Forbes's *Kalendar of Scottish Saints*. The only Celtic saints whose names appear in it are St Servanus, St Felan, and St Fyndoca, and Bishop Forbes comments at some length upon its composition as illustrating the historical attitude of the Cistercian Order to the ancient Celtic Church. "Culross," he says, "was a Cistercian house, founded in 1217 on an already existing religious establishment, which traditionally stretched back to the days of S. Servanus, and S. Kentigern, whose mother, S. Thenew, gave birth to him there. This kalendar is a witness to the complete Anglicanisation of the Scottish Church which took place after the epoch of S. Margaret. It will be seen how very few of the Celtic saints occur among its entries, and therefore we must believe that, while they retained a veneration for the ancient founder of the place, who was joined to the Blessed Virgin in the dedication of the church, the Cistercians of Culross very much ignored what had gone before, and cut themselves off in sentiment from the old historical Church of Scotland."

Culross was a noted centre of learning. Dr Hay Fleming, in his *Reformation in Scotland* (p. 515), notes a passage in the Register of the Privy Seal of 1589, in which it is stated that there had been "in all tyme by-gane" a grammar school within the abbey. Bishop Forbes

Fig. 1. The Culross Psalter. *Saluum me fac.*



says that even after the invention of printing the abbey was a great school of ecclesiastical caligraphy. Dr Joseph Robertson, in his Preface to the *Inventories of Mary Queen of Scots* (p. cxvi, *note*), notes that payments were made from the Treasury of £14 to the monks of Culross, for books to the Franciscans of Stirling, in 1502-1504; and of £24 "to Dene Mychaell Donaldsone, monk of Culross, for an grete Antiphonall buke" for the Chapel Royal, in 1538-39. It is to be feared that the "grete Antiphonall buke" has shared the fate of the Royal "Mess Buikis" which were burnt by the Regent Moray in 1569. Dr Robertson also points out, in Ferrerius' *Historia Abbatum de Kynlos*, that, in recording that Abbot Thomas who died in 1535 gave a Missal and a Gradual to his monastery of Kinloss, his biographer is careful to add that both were written at Culross.

The body of the book is written in a careful book-hand, with alternate red and blue versal letters, and numerous line-finishings in red, of a conventional leaf form. Some of the canticles, etc., at the end have been added in another hand, not so carefully. There is only one miniature in the book, in the initial B of Psalm i., representing David enthroned, playing on his harp. An illuminated initial is prefixed to each of the following Psalms: xxvi., xxviii., li., lii., lxviii., lxx., xcvii., cix., cxviii., and cxxxvii.¹ In almost all cases the pages containing these initials are surrounded by decorative borders of flowers and birds. In these gold is freely used. A small quantity of silver has also been used, which is now in a tarnished condition.

The manuscript is of interest in the technical history of painting. It was one of the MSS. examined by Principal A. P. Laurie in the preparation of his book on *The Pigments and Mediums of the Old Masters* (London, 1914). With reference to it he says (p. 94):—"The next manuscript examined was the Culross Psalter. The pigments on this seemed to be malachite, vermilion, a yellow about which I am not certain, and a fine quality of lake, but the main interest of this manuscript is the blue, which is no longer ultramarine, but azurite. This is the first appearance on the British manuscripts we have examined of the very bright and beautiful azurite which is found on late fifteenth-century manuscripts, and it continues through the sixteenth to the beginning of the seventeenth century. It is quite different in tint to the azurite found on the late thirteenth and early fourteenth century manuscripts. We do not know the place from which it was obtained, but we are told by Pacheco, the father-in-law of Velasquez, that azurite was getting rare owing to the conquest of Hungary by the Turks, and he mentions some being obtained from Venice. It is possible, therefore, that the origin of this fine azurite was some discovery of a new copper vein in Hungary. Azurite is found

¹ See note, p. 208.

as a surface copper deposit, and as the mining operations are carried deeper into the earth, it disappears, so that we could expect to find that the supply decreases after a certain length of time. If, however, Pacheco's statement is correct, the ultimate disappearance of azurite from the European palette may have been due to the presence of the Turks, and the old mines may have been lost during their period of occupation and never rediscovered."

The volume contains an interesting mark of ownership. A marginal note in a sixteenth-century hand states that "This buik pertens to Sir Archibald Prymrois." This is no doubt the Archibald Primrose who became a monk of Culross about the year 1540, and who after the dissolution of the monastery was Chamberlain of Culross. He was the elder brother of David Primrose in Culross, who was the great-grandfather of Archibald Primrose of Dahnenny, who on the accession of Queen Anne in 1703 became the first Earl of Rosebery. In the year 1630 the book was in the library of Sir James Balfour.

III.

NOTICE OF AN INVENTORY OF THE GOODS AND HOUSEHOLD
PLENISHING AND RELATIVE WILL AND TESTAMENT OF
AGNES BETOUN, A DAUGHTER OF CARDINAL DAVID BETOUN
BY HIS REPUTED WIFE MARION OGILVY: ALONG WITH
NOTICE OF A CARVED OAK CABINET FROM ETHIE HOUSE
SAID TO HAVE BELONGED TO THE CARDINAL: AND IN
APPENDIX AN INVENTORY OF ANCIENT WRITS OF THE
LANDS OF KELLY. BY ALEXANDER HUTCHESON. F.S.A.Scot.

Several years ago there came into my possession a bundle of old papers which had been picked up at an auction sale in Forfarshire. Amongst them was a document of special interest, although only a copy of an older writ. It professes to be a transcript of a will and testament of Agnes Betoun, a daughter of Cardinal Betoun and Marion Ogilvy. The date of the transcript is not given, but it appears from the writing to have been made about the beginning of the eighteenth century. It bears to be recorded in "Wm. Pattillock's large Prothocoll to be found in the charter chest of the town of Aberbrothock." Inquiry, however, at the Town Clerk's office, Arbroath, did not result in the discovery of the protocol book.

The relations between David Betoun, Abbot and Commendator of the Abbey of Arbroath, subsequently Cardinal and Chancellor of Scotland,

and Marion Ogilvy, third child and only daughter of Sir James Ogilvy, afterwards the first Lord Ogilvy, of Airlie, by his second wife, a daughter of Archibald fifth Earl of Angus, are too well known to be more than referred to here, although, so far as known to me, the subject has not been exhaustively dealt with. Those curious to follow it up may refer to the literary sources of information regarding the private life of the Cardinal. The lands of Ethie originally belonged to the Abbey of Arbroath. The House of Ethie, "the principal place of Athy," with its granary, was in the Abbot's possession in 1510. Its proximity to the Abbey and natural amenities must have commended it as a place of residence for the Abbot, and it is highly probable that Betoun occupied it on succeeding to the abbacy. Dr Gordon suggests that Marion Ogilvy was in residence here about 1530. Here at any rate tradition asserts Betoun resided until he purchased Melgund and erected the castle there in 1542, as a residence for his family.¹ The Castle of Melgund is situated 8 miles north-east of Forfar and 1 mile east from Aberlemno.

The Cardinal's arms and initials and those of Marion Ogilvy are carved on certain stones in the castle. He conveyed the lands of Melgund to her in liferent and to his eldest son David in fee. After the Cardinal took up residence at Melgund, Ethie House appears to have been occupied by David, Master of Crawford, and his wife Margaret Betoun, because after the murder of the Cardinal in 1546 they "laid claim to the furniture in the mansion-house of Ethie, if not to the house itself."

In the year 1547, Margaret Betoun and her husband, David, Master of Crawford, summoned Patrick, fifth Lord Gray, and his brother James Gray to appear before the Queen and Council to answer for their wrongous and masterful spoliation by themselves and their accomplices of the Place of Ethie and the house thereof. The summons, dated 5th July 1547, is at Kinnaird.

The circumstances attending the death of the Cardinal are too well known to require more than mention here. He was murdered in the Castle of St Andrews on the 29th May 1546.

¹ Sir William Fraser (*History of the Carnegies of Southesk*, lxxix) refers to a tradition that here at a certain hour of the night a sound is heard, resembling the tramp of a foot, in certain of the apartments and passages at Ethie, popularly referred to as "the Cardinal's leg," but he does not explain the origin of such an extraordinary spiritual manifestation. Having, however, heard the tradition with many embellishments still current in the district, I am able to supply the hiatus. The reference to "the leg" is said to be due to the Cardinal while at Ethie having suffered from a severe attack of gout, which necessitated his wrapping up the affected limb and foot in flannel, which, when he moved about through the house, left the sound of one footfall inaudible, while the resiliency induced by pain in the affected foot caused the other foot to fall with an increased insistency which never failed to cause instant flight on the part of the hearers. Those who were able to refer, generally at second-hand, to encounters with the Cardinal always described him as a very stout, little, red-faced man attired in a red dressing-gown and with a belt round his waist, and having one foot thickly wrapped up in flannel.

Sir William Fraser records that "not long after the Cardinal's death, Lady Melgund got into trouble for 'falsit.' This falsity, it appears, consisted in her having added certain words in letters which had passed under the royal signet. To escape the penalties of this crime she fled, and was denounced rebel, and put to the horn." She concealed her movable goods in different houses and lockfast "lumys" (vessels or chests). A warrant was granted at the instance of John, Archbishop of St Andrews, as Treasurer, to open doors and kists, and to charge all and sundry lieges, havers, and resettlers of the said goods to deliver the same to the Treasurer for the Queen's use, under severe pains.¹ See *The Carnegies of Southesk*, i. lxxviii, whence also I cull the following note:—"In 1552, Robert Carnegie of Kinnaird was named one of the procurators, by Marion Ogilvy of Melgund, for resigning the lands of Abdene, Kithyness, in the barony of Rescobie, for a re-grant to her natural sons, David and John Betoun."² This may have been a second David, the Cardinal's eldest son David being fiar of Melgund, and as such amply provided for.³

As we have seen, Marion Ogilvy had the liferent use of Melgund, but seems to have left it, for in 1565 she was in possession of Hospitalfield, about a mile west of Arbroath. She died in 1575; the date of her birth has not been ascertained, but her father, the first Lord Ogilvy of Airlie, died in 1504.

Agnes Betoun, the maker of the will, was at this time a widow. She had married James Ouchterlony of that ilk. The will, a copy of which is subjoined, is dated 12th June 1562. Her husband's name does not appear in it, and the date of her marriage has not been ascertained. The marriage must have been after 7th December 1547, for on that date the Queen gave a charter to James Oughtterlony, son and apparent heir to Alexander Oughtterlony of that ilk, of the lands and barony of Oughtterlony, *alias* Kelly, in the county of Forfar, which the said Alexander assigned, with certain reservations in favour of himself, and terce to Isabella Cunnyngname, his spouse, or to any other spouse who might succeed.⁴ This may have been in view of his approaching marriage. At all events, James Ouchterlony was dead before 6th January 1561, as appears from an inventory of writs, also hereinafter printed, where Agnes Betoun is referred to as "relicta quondam Jacobi Ouchterlony de eodem."

The will mentions four sons, David, Alexander, Gilbert, and John, and two daughters, Elisabeth and Katrine. On a perusal, it will be

¹ The original discharge, dated 26th February, eighth year of Queen Mary's reign, 1549-50, is at Kinnaird.

² The original procuratory is at Pitcur.

³ Duplication of Christian names was common at this period. There were two Davids in the family of the Cardinal's father.

⁴ *Reg. Mag. Sig.*

observed that by the terms of the will she retains right of reformation "gife sche convalescis," but "gife she inlaks" it was to have effect. Results show that she "convalesced," for she subsequently married, as her second husband, George Gordon of Schivas. I have not traced the date of this marriage, but it was consummated before 22nd November 1577, as on that date the King confirmed a charter, whereby George Gordon of Schivas and Gight, in fulfilment of a promise made to the deceased Mariota Ogilvy, Lady of Melgum, gave to Agnes Betoun his wife (daughter of Lady Melgum), during her lifetime, the lands and manors of Little Geicht, to which Gilbert Auchterlony was witness at Geicht, 20th October 1577.¹ This Gilbert was no doubt the son of Agnes Betoun by her first husband and named in her will. The editor of *The House of Gordon*² supposes Gilbert to have been "possibly a relative" of this lady, apparently unaware that Agnes Betoun had a son so named. There was another link between the two houses of Gight and Ochterlony: George Gordon was succeeded in Schivas by his cousin William Gordon, who married Isobell Ochterlony.

On 10th December 1579, the King, to implement a contract of 18th and 22nd December 1578, granted to Patrick Cheyne of Essilmonthe a fourth part of the lands of Tullymald in the parish of Turriff in the county of Aberdeen, "quhilk George Gordon of Scheves and Agnes Beton his wife have assigned in favour of the said Patrick."³

Very shortly after this transaction, George Gordon came by a violent death. In consequence of a feud in which he became embroiled, he was, late in 1579 or early in 1580, slain "besyd the wund-milne vpon the shoar at the ferrie of Dundie, where the Forbesses shott him vnawars with musketts. He fought with them a long tyme after he wes shott and wounded, and pursued them eagerlie, vntil he wes oversuayed with ther multitude. So he died feighting with great courage among them, having killed some of them at that instant."⁴ Mr J. M. Bulloch says Gordon fought a duel with John Lord Forbes on the shore at Dundee.⁵ The Privy Council Register calls his antagonist Alexander Forbes, younger of Towie.⁶

Agnes Betoun, after the death of her second husband, married as her third husband (before January 1583) Sir Patrick Gordon of Auchindown Sheriff-Depute of Aberdeenshire, brother of Adam Gordon of Auchindown (the notorious Edom o' Gordon) and of the fifth Earl of Huntly. She was soon once more a widow, for Sir Patrick was killed at the battle of Glenlivat, called also Glenrinnis, fought 3rd October 1594.⁷

¹ *House of Gordon*, i. 26.

² New Spald. Club, i. 26.

³ *Reg. Mag. Sig.*

⁴ Sir Robert Gordon of Gordonstoun's *History*, p. 174.

⁵ New Spald. Club, *The House of Gordon*, i. 192.

⁶ *Q.v.*, date 30th January 1580.

⁷ *House of Gordon*, i. 194.

On 26th July 1597, Dame Agnes Betoun, Lady Auchindoun, complained to the Privy Council that in 1595 certain persons named had stolen from her sixty-six wedders. These were duly convicted of the theft and found cautioners for the payment of the prices of said wedders. Subsequently, however, a long period having elapsed, she procured from the Council the denunciation of the said principals and cautioners as rebels.

This is the last notice that has been traced of Agnes Betoun. By her second husband, George Gordon, the Laird of Shivas and Gight, Agnes Betoun had only one child, a daughter, Elizabeth, who was served heir to her father 23rd June 1580. She was under the guardianship of her step-father, Sir Patrick Gordon of Auchindoun, and married Sir George Home of Spot, High Treasurer of Scotland, afterwards Earl of Dunbar, from whom many noble families of to-day are descended, justifying the remark attributed by Macfarlane to the Duke of Lauderdale, that "there was more of the Cardinal's blood running in the veins of the nobility of Scotland than of any one single man since his time."¹ Mr J. M. Bulloch has traced and supplies a number of these descents.²

I now come to notice a very remarkable curiosity at Ethie, which by the courtesy of the Earl of Northesk I am here enabled to illustrate and describe. This was an oak cabinet supposed to have belonged to Cardinal Betoun.³

We are indebted to Sir William Fraser⁴ for the only information about this interesting piece of furniture, as it originally stood in Ethie House. It is stated by Sir William, who was privileged to inspect the cabinet, to have been a fixture in one of the walls of a chamber, known as the "haunted room," the door of which was always kept locked. He thus describes it: "The front of the cabinet is beautifully carved. Similar carvings are to be seen in the Cathedral of Aberdeen, which was built by Bishop Elphinstone, and on the doors of the rood-screen in the church of Easter Foulis, in Perthshire." Sir William adds his opinion that "the carvings at Aberdeen and Foulis are probably older than those in the cabinet at Ethie." This opinion may be open to question, but will be considered later on when I come to deal with the Ethie carvings.

Fortunately, I am able to supplement Sir William Fraser's information, and to supply drawings of the carvings. How this came about will now be related. In or about 1890, it seems to have been resolved to have the cabinet removed to some one of the principal apartments, but, owing to its being

¹ Macfarlane's *Genealogical Coll.*, i. 10, Scottish History Society. ² *House of Gordon*, i. 194.

³ Mr A. O. Curle has suggested that this may have been an ambry. I think this extremely likely, in which case the chamber in which it was contained may have been used as an oratory. I have later referred to the beautiful little oratory in the old Castle of Auchinleck, only some ten miles distant from Ethie.

⁴ *The Carnegies of Southesk*. i. lxxix.

fixed as above mentioned in the walls of the "haunted room," it was found that only the front part, consisting of the carved doors, was available, and that a suitable framework would be necessary. With this view

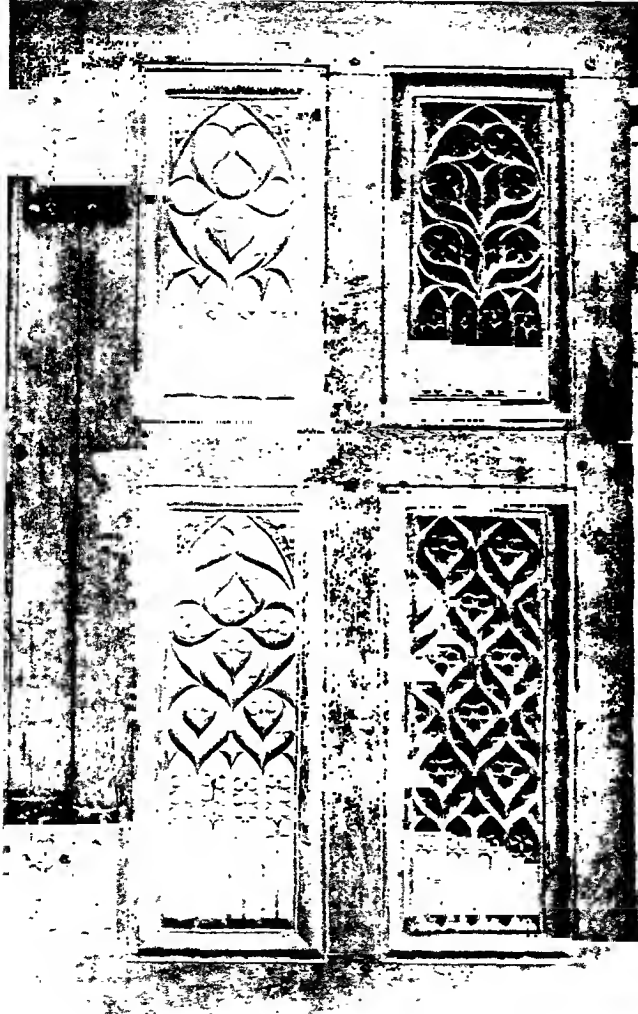


Fig. 1. Left-hand Door of Ethie Cabinet.

the doors were removed to a cabinetmaker's premises, where I happened to see them. Naturally, I felt greatly interested, especially when I learned the origin of the carvings. Accompanying the doors were four carved oak

panels, suggestive of ecclesiastical work, which I was informed had been found in an apartment at Ethie House known as Cardinal Betoun's Chapel, then said to be used as a storeroom for spare furniture, books, etc.

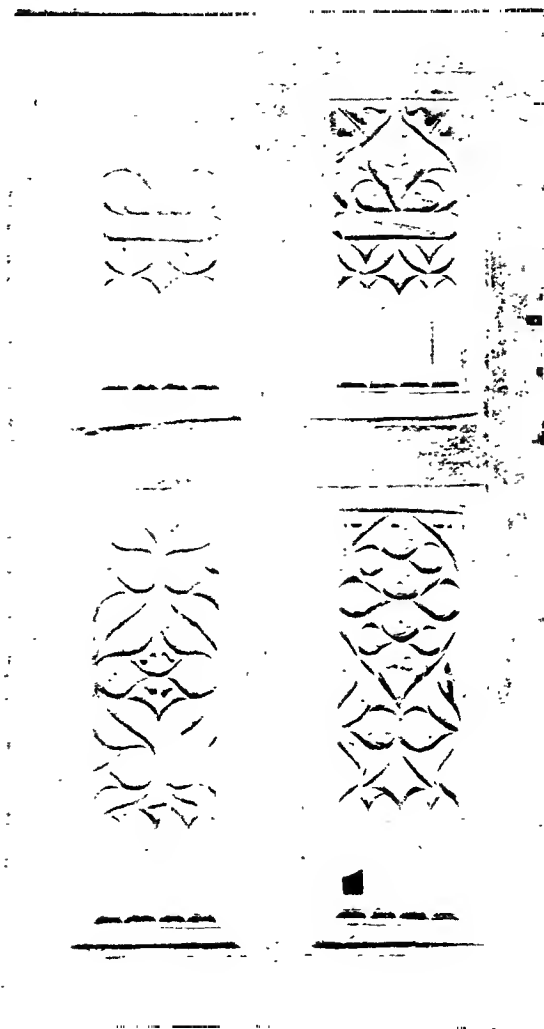


Fig. 2. Right-hand Door of Ethie Cabinet.

I was fortunate enough to procure photographs of the doors of the cabinet (figs. 1 and 2) and of the four panels (figs. 3 and 4), and have now pleasure in passing them on for reproduction in the *Proceedings* of the

Society. I have no doubt they will be regarded with much interest; and, so far as known to me, they have never before been published.



Fig. 3. Carved Oak Panels found in "Cardinal Betonni's Chapel," Ethie House.

The door of the cabinet, as will be seen from the illustrations, is in two leaves, four panels in each leaf and no two panels alike; the panels filled in with tracery.

The tracery is an imitation of that usual in stonework in the windows of ecclesiastical buildings. The style is Late Decorated, without, however,

any distinct trace of Perpendicular work, unless the two lower panels in the left-hand door (fig. 1) should be so regarded, but I think them more likely to be French in feeling, with a suggestion of the Flamboyant style. The introduction of a foliaceous ornament in some of the spandrils of the upper arches is not to be disregarded. The two upper panels of the right-

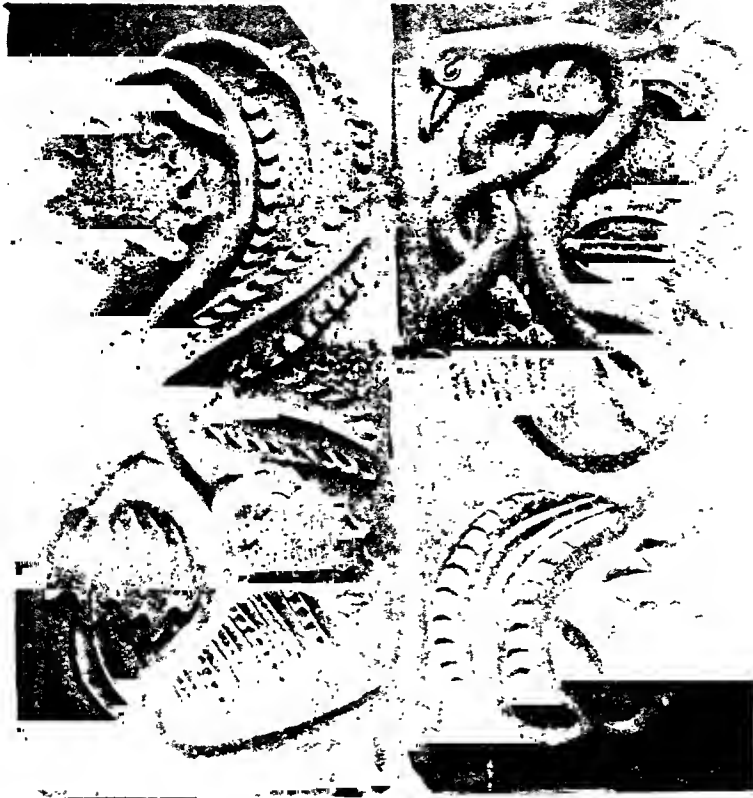


Fig. 4. Carved Oak Panels found in "Cardinal Betoun's Chapel." Ethie House.

hand door (fig. 2), having the transome-like openings each divided by a slanting shaft to form two spaces with their points right and left, and the semicircular heads not cusped, present a very curious and uncommon feature, possibly unique in its treatment. This curious feature has its origin in the neck-mould which forms an invariable adjunct to the conventional fleur-de-lis, in art and architecture. In this form it is repeated six times, on the front of a carved, traceried coffer of early fifteenth

century date in the Victoria and Albert Museum, South Kensington, and on the front of a cupboard in the Musée de Troyes.¹ The same transome-like figure, but ornamented with an oblique banded enrichment, occurs in the six upper panels of the rood-screen in King's College Chapel, Aberdeen.²

A careful examination suggests that the door panels are older than the framework, there being a certain want of co-ordination in their lines, particularly noticeable in the lower right-hand panel of the right-hand leaf of the door, which is distinctly out of line with the framing. That the framing is old, however, is indicated by the wooden pins with which it is put together.

The lock is not the original, as shown by the marks of a larger lock on both leaves, placed on the outside as usual in all old wood cabinets.

There is no reason to think the four separate panels (figs. 3 and 4) were in any way a part of the cabinet. They bear a remarkable resemblance in design and execution to certain oak panels discovered shortly before 1881 in the garrets of an old house in Montrose, described and illustrated by the late John J. Reid, *Queen's Remembrancer for Scotland*.³ The thistle is treated in one of the Ethie panels, and is present on one of the Montrose panels, as well as on a famous panel in the ancient Abbot's House, Arbroath. A significant feature, suggesting identity of period for at least the framework of the Montrose door, is the existence on its central styles of the remains of small niches, surmounted by cusped tracery resembling that in the Ethie door panels. Had the styles of the Ethie doors been similarly ornamented, such would not have been incongruous, but, occurring as the niches do on the Montrose door, they are not in keeping with the panels there, which distinctly point to a more recent period than that to which the niches are due. Mr Reid, on the strength of a supposed identification of a coat-of-arms, assigned the Montrose panels to 1515—a date, in my opinion, much too early for them. I should be inclined to place the traceried panels at Ethie not later than 1480. Sir William Fraser seems to have confused King's College Chapel, with its exquisite wood-carvings, with Aberdeen Cathedral. As for the Foulis door which he thinks older than the cabinet carvings at Ethie, I would remark that the Foulis tracery is Perpendicular in feeling and therefore probably the more recent.

The following is a transcript of Agnes Betoun's will, with the Inventory of her goods, etc. By way of glossary, I have interpolated within square

¹ For drawings of these see Roe's *Ancient Coffers and Cupboards*, London, 1902, p. 70.

² See drawing given by Macgibbon and Ross, *Eccles. Arch. Scot.*, iii. 291; also Billings' *Baronial and Ecclesiastical Architecture*.

³ *Proc. Soc. Ant. Scot.*, xvi. 61.

INVENTORY AND WILL AND TESTAMENT OF AGNES BETOUN. 223

brackets any explanations necessary; otherwise the transcript is given precisely as it appears in the document, except that, whereas in the original the items are run on, they are here for convenience of reference given in columnar order.

INVENTARIUM BONORUM AGNETIS BETOUNE.

Duodecimo die mensis Junij Anno Domini Millesimo quingentesimo sexagesimo secundo, Indictiōnē quinta. In mei Notarij et testium subscriptorum presentia personaliter constituta proba Mulier Agnes Betoun Domina de Kelly in Angusia, viva voce et sana mente suum inventarium et bonorum omnium testamentum fecit et condidit apud Balmaddy in forma vulgari sequen.

In primis fatetur habere xliiii drawing oxen price of the peece v lib vj ss viii d.

Summa ij^c xxxiiii lib xiii ss iiid.

Item xxiii ky and aue buyll price of the peece v lib Summa j^c xx lib

Item xxx yeald cattell price of the peece iii lib Summa lxxxx lib

Item aue black horse the price vj lib xiii ss iiid d.

Item aue Brown meir the price vi lib xiii ss iiid d.

Item aue Black meir the price xl ss

Item iii young staggs price of the peece xl ss Summa viii lib

Item aue stag [staig, a horse in its first year] price iii lib

Item aue gray horse price xiii lib vi ss viii d.

Item v^{xx} viii [xx above the line indicates a score: 5 score and 8=108] ewes and gymmers [gimmers, ewes 2 years old; sometimes barren ewes are so named] price of the peece xii shilling Summa lxiiii [lib] xvi

Item lxxi waddars and dytmonds [wedders=castrated rams; dytmonds=wedders of the 2nd year] price of the peece xv ss Summa liii lib v ss

Item lv Lambs price of the peece vj ss Summa xij lib x ss.

Item Sawyn [sown] in Ballmaddy vij bolls wheat estimet to x bolls grouht [growth] price of the boll xl ss

Item Sawyn in Ballmaddy xix bolls beir estimet to xl bolls grouht price of the boll xxx ss

Item Sawn in Ballmaddy viii^{xx} and vj bolls of aitis [oats] estimet to twenty score bolls grouht price of the boll xx ss

Item Sawn in Ballmaddy ii bolls ry estimet to vj bolls ry price of the boll xxx ss

Item in Sawynd in Balcathie xx bolls of quheit [wheat] estimet to xl bolls of grouht price of the boll xl ss

Item Sawing in Balcathy xxii bolls Beir estimet to xl bolls of grouht price of the boll xxx ss

Item Sawyn in Ballathy viii^{xx} bolls aits estimet to xviii^{xx} bolls of grouht price of the boll xx ss

Utencils and domicils in Kelly and Balmaddy

Imprimis xx fedder beds with thair bowsters

Item xxx pair double and ii pair single blankets

Item xxii pair of linyng scheyts [linen sheets] and xx pair rownd schetys

Item foure werdders coweris to beddys [verdurous=*i.e.* flowered bedcovers]

Item xi Sewit coweris to beddys [sewed]

Item vj wowing coweris [woven covers] to beddys

Item xxv coddys [pillows]

Item three pair of heid scheitys

Item twa buyrd clayths of Dornyk [table-cloths of Dornick, a plain make of diaper]

Item xviii serviets of Dornyk [table napkins]

- Item twa weschin towellis of Dornyk [washing towels, kitchen towels]
 Item x buird clayths of small lyning [table-cloths of small linen]
 Item of round lyning ix buird clayths
 Item xxii small lyning servietis
 Item xxii sewit servietis
 Item xxii servietis of rownd clayth
 Item xxii servietis mirkit with sylk [marked, possibly embroidered, with silk]
 Item vii sewit weschin towlys [washing towels]
 Item xii onsewit weschin towlys
 Item v pair of Sey cowrtingis [sey, a kind of woollen cloth made by families for their own use; here used as curtains, probably for beds]
 Item twa pair of Scottis cowrtingis
 Item ane pair of lyning cowrtingis
 Item ii pair of cannobers ane yrof grene ane other of lyning [two sets of bed-canopies: pair at this time meant a set]
 Item in the new Chamber of Kelly ane akyn bed [oak bedstead] with ane wairstall [a night-stool]
 Item in the said Chalmer ane other bed and copalmery of ayk [oak; "copalmery" is usually explained as a cup-ambry or cupboard; such seems scarcely applicable to a bedroom, and a wardrobe may be intended]
 Item in the galry chalmer ane bed with ane falling bed, wairstall and ane taiffill of ayk [table of oak]
 In the heiche [high] chalmer ane bed and wairstall of ayk and ane Bed of fyr
 Item in the hall chalmer ane bed and cannoby of planetree with ane taiffill and ane furme
 Item in the how [hollow, perhaps arched] chahner under the hall twa beddys and ane almyery of fyr
 Item in the lang chalmer three beddys and ane wairstall of fyr with ane greit kyst of ayk
 In Kelly ane coffer of ayk
 Item in the hall of Kelly ane desbuyrd [dish-board, or perhaps a plate-rack] and three syd buyrds ane copalmery ane langsadill [long-settle, an early form of sofa framed of timber, and possibly made up as a bed at night] twa furnis and ane cheyr [chair]
 Item in Balmaddy ane bed of ayk three letycambis [a portable or folding bed; *Fr. lit de champ*]
 In the neither chalmer vj beddys of fyr twa gritt kysts of ayk ane kyst of fyr twa cofferis
 Item in the hall of Balmaddy ane desbuyrd twa syd buyrdis twa furnis twa cheyris ane almyery of ayk and ane copbuyrd
 Item v compter clayths [possibly counterpanes]
 Item xi cowsings of sett work [cushions of sewed work; the "sett" of tartans means arrangement of pattern]
 Item four new cowsings of sett work
 Item twa cowsings of grein velvet
 Item four wowing and four sewitt cowsings [woven and sewed]
 Item in Kelly and Balmaddy xi Bressyn pottis and v bressyn pannys [brass pots and pans; the Scots pronnciation is still "bress"]
 Item ane copper cattyll [kettle] and ane bressyn cattyll
 Item ane brew laid [a brewing utensil probably made of lead] and ane bow kettyll [kettle with bow handle?]
 Item ane bressin mortar twa maskyn fatts [vats for brewing, a mash-tun]
 Item fave [five] geill fattys [jelly-vats] xv aill barrillis
 Item v aill rubberis [usually defined as barrels; but these being already named "barrillis," something else may be intended] and twa wyne rubberis

- Item twa watter standis
 Item vj greit skeilis [tubs] and four litle skeilis
 Item v cheis fatts [cheese presses] three kye ligs [?] and twa kytts [small wooden tubs]
 Item vj yron cruiks [iron crook, hook and chain for suspending pots over fire in kitchen]
 Item four spetys [an iron prong on which meat was roasted] and four lantrons
 Item ane small yron brander [gridiron] and twa yron laddles
 Item v ynglis [English] pewter platis and xlix of Scottis pewter platis
 Item twa pewter dyebis [dishes] and v sawcерыs [saucers]
 Item xviii tyn trounscheers [trenchers] and twa bassings [basons] of tree
 Item twa saltfaltis [salt-foots, old term for salt-cellar] of tyn
 Item three quarts and ane pynt stopys [stoups] of tyn
 Item three water pottys of tyn and viij yron tayngys [iron tongs]
 Item ane half gallone and four quart stoppys of tree [wooden stoups]
 Item three glessis and ane Lawer of gless [laver, a bowl of glass]
 Item ane treying cope [possibly a measuring cup] of ane siller futt [with silver foot] with X aill coppys [ale-cups] and ane bycker of tree [tree=timber; a wooden drinking-cup called a bicker]
 Item viij bressine chandeleris [brass candlesticks] w^t three boxis [possibly candle-boxes, usually made of tin, to preserve the candle from mice] and ane tyn flachon [flagon]
 Item v cannessis [a piece of canvas was called a "cannis"; the word is still in use in Forfarshire]¹ and ix sekkys [sacks: this is precisely the Scots pronunciation still in use]
 Item v flesche fatts [flesh or beef-tubs] and vij toubbys for fische² [tubs for salted fish] three cuddys [small tubs or pails]
 Item vj dry war standys and twa dry war barrilis
 Item twa meil grualis [meal-giruals] and ane candill kyst and twa palzeonis [this is usually explained as meaning pavilions or tents, but seems strangely inapplicable here]
 Item vij wanys v plews ane cart and vij pair harrowys wih all gangand geir [harness furnishings]³

¹ I knew a jobbing gardener who in going to and from his work carried his tools wrapped up in what he called his "cannis," which served the purpose of keeping his tools firmly together, but his main object was to provide a piece of cloth useful for collecting leaves and rubbish.

² Salted fish. This was at this time the only form in which fish could be got in inland places. In 1488, fish salted and barrelled are mentioned in an Act of James IV. In 1540, the fish usually barrelled were salmon, herring, and cod. (Roger's *Social Life in Scotland*, i. 412.)

³ "Wanys" may have been waggons of some sort. A four-wheeled market-cart is in England termed a wain, but seven waggons seems rather a large order for a rural district in Scotland at this period. Jamieson (*Scottish Dicty.*) cites only one reference to the word "Wane," and suggests a waggon drawn by oxen. Carts are mentioned (1534-5) for the conveyance of stones to the reparation of Linlithgow Palace, but whether wheeled or sledges does not appear (Ferguson's *Linlithgow Palace*, p. 309). Roger, who quotes valuable references (*Social Life in Scotland*, i. p. 142), says "agricultural carts had no wheels until about 1770." The first wheels were solid, made of oak, three feet in diameter and wholly unprotected by iron. The axle-tree turned with the wheels, which were thence termed "tumbler-wheels" (Roger, i. 218). That in the will, "wanys" are associated with "plews and ane cart" would seem to suggest vehicles, but it is doubtful if there were many wheeled vehicles in Scotland then. Certainly there would be none in rural districts, nor for long after this, because of the want of roads.

The mention here of "wanys and cart" implies a distinction, and probably signifies that neither were wheeled carriages, but what were known as "slypes," such as even to the present day are in use in the Highlands for taking home hay or peats over fields where no roads are available for wheeled conveyances.

The said Agnes in perfeit witt and knowledge maid constitute nemit and ordanit honourable persons, Marion Ogilvy hir modir Lady of Melgound Alexander Betoune hir Brodir Archiden of Lowdiane and Alexr Lyndesay in wayne [Vayne] hir undontit tutors and factors and defenders to David, Alexander, Gilbert and John Ouchterlonys, hir sonys, and to Elisabet and katrine Ouchterlonys hir dochteris and also hir executors and intrometters with hir haill gndis and geir and proffit of the ward of Kelly and mariage of hir sone the Lard of Kelly To be intromittit usit and dispoit be yame to the utilitie weill and profeit of hir said barnys in manner followand That is to say the haill gudis and geir and proffit of the said Ward to be equalie dispoit amangis hir said four sonys and the haill proffit att ma be hade be my said executors for the marriage forsaid to be geivine to the marriage of hir said twa dochteris committand power to hir said executors to supple the marriage of hir said dochteris with sume part of the proffit of the said Ward gife they think it neidfull and for the mair securite of the weill and proffit of hir said barnys, sche maid constitute and ordanit hir saidis foure sonys hir undoutit assignais and cessionars conjunctlie and severallie to the haill profits of the said ward ordynand the tyme thyrof and in lykweis maid and nemitt hir said twa dochteris assignais to the profits of the marriage of hir said sone the Lard. Reservand to hir gife sche convalessis, reformationne att hir plesor of this hir letter Will, and assignatione, and gife she iulaks to have effect and strenth as said is and attoure constitute and ordanit David Rosse and Gilbert Auchinleck of the Ylks oure men (oversmen) to see att this Will be fullfillit to hir said barnys. And also sche testifeit att Unqll the Lard hir husband lent and deliverit his chene of Gold to the Lard of Melgound in keping to be furthennand to his sone and air. Actum apud Balmaddy horam circiter under unam ante meridiem presentibus, Jeronimo et Edwardo Ouchterlonys Waltero Lyndesay, et Adam Symmer.

Willielmus Pattillok Notarius Rogatus ad Premissa

This is recorded the 160 leaf of Wm. Pattillok's large Prothocoll to be found in the charter chest of the town of Aberbrothock.

The will, as may be seen, contains some interesting items, but little in the inventory is specially remarkable. In fact, it is more noteworthy in what it omits, which would seem to indicate for the plenishing of the two houses of Kelly and Balmady a meagreness not easily reconcilable even with the plain living of those times; as, for instance, we find that in the house of Kelly there was only one chair and that it stood in the hall. Are we to suppose that this was a special chair, a chair of state, and that any other chairs may have been regarded as negligible? In the hall at Balmady there were two chairs and two "furnes," but no other seats throughout the house.

There were also forms at Kelly. Perhaps the "kysts" were used as seats. Another remarkable feature casting a strange light on the social life of the times is that, with one exception, each chamber, other than the hall, contained two or more beds. In Kelly, the new chamber had two beds; the gallery chamber, a bed and a folding-bed; the "heich," or high, chamber, two beds; the chamber under the hall, two beds; and the long chamber, three beds. This was, however, nothing to what obtained at Balmady, which had apparently only three apart-

ments, the hall and two bedrooms, one of which contained four beds, and the other six! The kitchens were supplied with abundance of brewing and cooking utensils and dishes, besides beef and fish tubs and meal girnals, but nothing in way of furniture; neither seats, tables, dressers, nor beds for servants. There is evidence of sewed work in cushions and flowered bedcovers, but no mention of tapestry, silver plate, or personal jewellery, with a solitary exception where notice is taken of a gold chain lent by the lady's husband during his lifetime to the Laird of Melgund (David Betoun, her brother) in keeping only, to be forthcoming to his son and heir. This son was David, mentioned in the list of Agnes Betoun's sons given in the will.

David Betoun, the Laird of Melgund, Cardinal Betoun's eldest son, and brother of Agnes Betoun, married Margaret, second daughter of John, fifth Lord Lindsay of the Byres, her elder sister having married Norman Leslie, the assassin of the Cardinal.¹ The dates of these marriages respectively have not been ascertained.

The Ouchterlonys are believed to have been in possession of Balmady about 1480, but before this the family were in possession of Kelly, a part of which was received in exchange for Preyston, in Ayrshire, about 1442, at which date they were designed of Kelly. The name of this estate they changed to that of Ochterlony, as appears by a deed of 1468, bearing to have been granted by William Ouchtirlowny of that ilk at his house of Ochterlony or Kelly.² A different relation is, however, given by John Ochterlony of Guynd, who wrote an *Account of the Shire of Forfar*, about 1682, and may have had access to family records not now available. He describes Balmaddie as "the mannor house of the family, and their buriall was at the kirk of Rescobie, until they purchased the lands of Kelly, where, having built ane house, they changed both dwelling-place and burial." Balmady must, however, have had its attractions for James Ochterlony and his wife Agnes Betoun, who seem to have made alterations on the house, as shown by certain old stones, believed to have originally been in the walls of the house, but which are now in some of the outbuildings. They bear the initials J. O. and A. B., along with the arms of Ochterlony and Betoun of Balfour.³

¹ The dagger with which, as tradition affirms, Norman Leslie stabbed Cardinal Betoun is preserved at the House of Rothes, Leslie, Fife.

An engraving and description of the dagger are given in Gardiner's *Miscellany*, published at Cupar, Fife, in 1841. It is described as follows: "The sheath is of silver, richly chased, and the handle of ivory, studded with star-like silver nails. The blade is somewhat raised in the centre." The ornament on the sheath as shown in the engraving suggests Persian work. "The star-like silver nails" represent each a flower of six petals, corresponding with the floriated ornamentation of the sheath.

² Jervise's *Memorials of Angus and Mearns*, p. 336.

³ Warden, *Angus or Forfarshire*, v. 86.

It only remains to be noted that one of the trustees constituted under the will was Alexander Betoun "hir Brodir," Archdean of Lothian, who, it is said, subsequently became a Protestant. He succeeded in the Archdeanery to Walter Betoun, his father, the Cardinal's brother. Another trustee was Alexander Lindsay of Vayn, married to a sister of Agnes Betoun; Macfarlane, who does not name this sister, says she was the Cardinal's third daughter by Marion Ogilvy.¹ There is, however, no doubt she was Elizabeth, as appears from the confirmation by the Queen, in favour of Alexander Lindsay of Vane and his wife Elizabeth Betoun, of the lands of Scryne in the barony of Panmure, Forfarshire, dated 31st Aug. 1547.²

The Lindsays were in possession of Skryne before this, as Walter Lindsay of Skryne appears as commissioner in a retour of service to John Carnegie of Kinnaird and Euphame Strachin his wife, 1509-1513.³ David Rosse of that ilk, one of the oversmen under the will, may have been the same David Rosse of that ilk, or a son of his, who appears in a retour of service of James, Lord Ogilvy, 5th May 1506. Gilbert Auchinleck of that ilk, the other oversman, belonged to an old family, hereditary armour-bearers to the Earls of Crawford. The old castle of Auchinleck, or Affleck, as it is now called, is in good preservation, and has lately been acquired under the Ancient Monuments Act by H.M. Office of Works. The castle is specially interesting as containing an oratory, with ambry and piscina. It is situated close to Monikie waterworks, the property of the city of Dundee. I have not traced Adam Symmer, one of the witnesses. He was probably a member of the family of Symmer of Balzordie at this period. The other witnesses, Jeronimo and Edward Ouchterlony, are mentioned in the inventory of the writs of Kelly, found also in the bundle of old papers which contained the will, and which on account of its interest in casting a light on the family connections is printed as an appendix to this paper *in extenso*. Unfortunately, the dates of the respective writs are not given. The inventory, however, contains one or two specially interesting items. These are, first, a charter by Malcolm Canmore — its purport is not mentioned; and second, two copies of the register of Aberbrothock; also a confirmation by King David, but which one is not indicated. It is interesting to note that in 1848 a manuscript which "probably belonged to the Cardinal" was found in a closet at Ethie. This MS. was supposed to be a portion of the original register of the Abbey of Arbroath, and was said to have been of great service in the printing of the *Registrum Vetus* from the MS. in the Advocates' Library, which

¹ *Geneal. Coll.*, i. 10.

² *Reg. Mag. Sig.*

³ *Fraser's Carnegies of Southesk*, i. 22.

was supposed to have been only a transcript from the above. Could these copies of the register which were amongst the writs of Kelly be traced, they would be valuable for comparison.

APPENDIX

INVENTARIUM EVIDENTIARUM DE KELLY

Sexto die Januarij anno Millesimo quingentesimo sexagesimo primo Agnes Betoun relicta quondam Jacobi Ouchterlony de eodem. coram me notario publico, et testibus subscriptis. ex consensu Alexandri Lyndesay de Wane. Davidis Rosse de eodem. Patricij Gardyne de eodem. Willielmi Ouchterlony de Seatoune. Joannis Ouchterlony in Neitherkelly et Jeronimi Ouchterlony in Ethmuthie. presentium et consentientium deliberavit. subscriptas evidencias Gilberto Auchinleck de eodem in firma custodia ad utilitatem successorum dicti quondam Jacobi Ouchterlony de eodem. Et primo. litteras reversionum Willielmi Ouchterlony super terras de Bonnytoune. Item Reversionem Mariota Ogilvy de terris Bahnady et Chapletoune. Item Cartam Kennymeikle factam Jacobo Ouchterlony et Agneti Beton. Item Cartam de Pitteumray. Preceptum et sasinam Willielmi Ouchterlony. Perambulationem morum inter Pannure et Kelly Procuratorium ad resignandum Balmady et Chapletoune in manibus superioris. Reversionem de Neitherkelly. Item conformationem Baronie de Kelly. Cartam Willielmi Ouchterlony Baronie de Athirneikylie. Cartam Elisabethæ Lermonth Preceptum sasinæ Jacobi Ouchterlony. Cartam feodi Jacobi Ouchterlony baroniæ de Kelly. Cartam dicti Jacobi de Shannaly Reversionem factam Alexandro Ouchterlony de eodem. Literam actornatus Jacobi Ouchterlony de eodem. Literam Interfectionis Domini de Woodwray sasinam Alexri Ouchterlony Baronie de Kelly Reversionem Walteri Lyndesay annui redditus de Balmirmor. Revocationem dicti annui redditus. Cartam preceptum et sasinam de Shannaly tentam per Jacobum Ouchterlony de Alexandro ejus patre. Item Sasinam Alexri Ouchterlony de Kennymeikle. Sasinam Willielmi Ouchterlony de quinque mercis annui redditus de Pannure. Confirmationem Willielmi Ouchterlony baronie de Kelly Cartam villæ de Ouchterlony. Confirmationem Willielmi Ouchterlony sasinam Alexri Ouchterlony de Balcathie. Reversionem de Balmady et Chapletoune. Instrumentum inter Dominum de Kelly et Seryngeour de Fardill. Cartam de Pitteumray. Sasinam Alexri Ouchterlony baronie de Kelly. Sasinam Willielmi Ouchterlony baronie de Athermeikylie Instrumentum inter Dominos Pannure et Kelly penes Pitteumray. Preceptum et literam Balivatus Alexri Ouchterlony super Athermeikyle Cartam de Shannaly. Literam Balivatus Agnetis Douglas. Instrumentum Agnetis Douglas. Instrumentum terrarum de Ouchterlony. Preceptum de Pitteumray. Copiam contractus inter Dominum de Kelly et Mariotam Ogilvy. assedationem Davidis Barclay. Cartam Agnetis Douglas. Cartam Archibaldi Crawford. Sasinam Domini Jacobi Ouchterlony de Roscoby. Confirmationem de Pitteumray. Sasinam Willielmi Ouchterlony de Kennymeikle. Instrumentum inter Dominos. Pannure et Kelly. Sasinam de Pitteumray. Obligationem Douglas. Cartam Barclay super tertiam partem de Kelly. Renunciationem de Knox. Cartam de Kenny. Ratificationem reversionis de Balmady. Principale instrumentum Margaritæ Gardyne. Preceptum Sasinæ de Kemy. Sasinam de Pitteumray. Indenturam inter Kelly et Pannure. Confirmationem Domini de Pannure. Cartam de Greenfoord. Cartam Malcolm Cannore. Preceptum de Pitteumray. Confirmationem David Regis. Instrumentum Magistri Joannis Auchinleck. Cartam de Kennymeikle. Preceptum de Shannaly. Cartam datam per comitem Angusæ. Instrumentum

inter Barelay et Douglas, Confirmationem Kennymeikle, Cartam Roberti Ouchterlony de eodem. Instrumentum Willielmi Ouchterlony super Shannaly, Licentiam Craigy Wallace, Procuratorium Agnetis Douglas, Assedationem Agnetis Douglas, Cartam super Balmaddy et Balpetry, Sasinam Domini de Woodray, Instrumentum super Shannaly datum per Magistrum Joannem Ballentine, Copiam Registri de Aberbrothock, Preceptum Jacobi Ouchterlony super Shannaly, Cartam . . . liquam de Kelly, Obligationem Domini de Glamiss, Cartam Agnetis Douglas, Preceptum super Kelly, Aliam Copiam Registri de Aberbrothock Instrumentum exonerationis Willielmi Scott, Copiam confirmationis, Acquitantiam Domini de Woodray, Testamentum Alexri Ouchterlony, Aliam exonerationem de Woodray, Compositionem Justiciarij, Aliam acquitantiā de Woodray, Testimoniale Renunciationem Murray et Margaritæ Gardyne de Balmaddy, Contractum inter Alex^{rum} Ouchterlony et Joannem Auchinleck, Processum Curiae, Acquitantiā Woodray, Instrumentum Alexri Kyd officarij de Athermyklie, Copias contractus, Literam Balivatus de Kelly, Duas lie Rettours, Instrumentum de Kennymeikle, Assignmentem Magistri Joannis Auchinleck, Copiam Cartæ Margaritæ Gardyne, Obligationem Magistri Joannis Auchinleck, Cartam antiquam de Kelly, Preceptum vicecomitis, Contractum inter Dominum de Kelly et Mariotam Ogilvy, Contractum inter Dominum et Joannem Ouchterlony, Inventarium Bonorum datum per

Mariotam Keith, Procuratorium Domini de Kelly, Copiam Cartæ de Kelly (*sic*), Reversionem de easterknox, Licentiam Davidis Guthrie, Appunctuamentum inter Dominum et Dominam de Kelly, Literas arrestamentorum, Acquitantiā Consanguineorum de Woodray, Copiam Indorsationis literarum autoritatis, Cartam de Balmaddy et Chapletoun, Sasinam ejusdem, preceptum ejusdem, Reversionem Joannis Farrar de Kenny, Renunciationem de Knox, Remmciationem Christinae Bowack de Rottenraw, Duas Reversiones Alexri Ouchterlony super Greenfoord et lyn, Renunciationem Thomæ Ogilvy de Greenfoord et lyn. Præfatus Gilbertus Auchinleck fatebar se recipisse omnes et singulas prenominatas evidencias respective, a prefata Agneti Beton, in forma custodia ad utilitatem successorum dicti quondam Jacobi Ouchterlony, Obligando se et suos successores in forma uberiori, ad producendum, vel deliberandum omnes et singulas predictas evidencias, sen aliquam partem earundem toties quoties, per dictam Agnetem vel heredes dicti quondam Jacobi pro utilitate suorum successorum, requisitus vel requisiti fuerint. Et ad hunc effectum, Constituit Magistros Joannem Abircromby et Davidem McGill, Suos procuratores, ad registrandum premissa in libros consilij Dominorum, ad habendum vigorem acti dictorum Dominorum pro conservatione premissorum, super quibus dicta Agnes petiit unum seu plura instrumenta. Acta erunt hæc apud Kelly, horam circiter quintam post meridiem, Presentibus ibidem Patricio Gardyne de eodem, Davide Rosse de eodem, Alexandro Lyndesay de Wane, Richardo Melvill, Joanne Ouchterlony in Neitherkelly, Willielmo Ouchterlony fratre germano dicti quondam Jacobi, Alexro Ouchterlony alio ejus fratre, Edwardo Ouchterlony, Jeronimo Ouchterlony, et Willielmo Ouchterlony de Seatoun, Eodem die tempore et loco Agnes Beton relicta quondam dicti Jacobi confessa est se habuisse in custodia, Cartam, preceptum, et Sasinam Baronie de Athermeikyle cum molendino. Item cartam preceptum et Sasinam de Kenny, Et Cartam cum precepto et sasina de Shannally, de quibus predictis evidentijs, suis manibus prefata Agnes obligavit se, in forma uberiori ad deliberandum Instrumentum transumptum, proximioribus, Consanguineis heredibus, et ad inveniendum sufficientem Cautionem quod predictæ principales evidentiæ de Kenny, Athermeikyle, et Shannaly post suum decessum pervenient ad utilitatem heredis succedentis, dicto quondam Jacobo. Et ad hunc effectum constituit et nominavit, Magistros Joannem Spence et Davidem Borthwick, ad registrandum

singula premissa pro sua parte. in Libris Concilij. Ibi habenda vim acti Dominorum Actum Coram testibus prescriptis.

Willielmus Pattillok Notarius Rogatus ad Premissa.

This is recorded the 149 leaf of Wm. Pattillok's Prothocol to be found in the Charter Chest of the town of Aberbrothock.

IV.

NOTE ON ADDITIONAL OBJECTS OF BRONZE AND IRON FROM NEWSTEAD. BY JAMES CURLE. F.S.A. Scot.

Two objects, a fibula and small spoon (fig. 1, Nos. 1, 2), which had been picked up by a visitor to the scene of the Newstead excavations, were recently restored to their rightful place in the National Museum. The finder had taken them from the debris of a rubbish-pit on the field lying to the north of the fort, No. 610 of the O.S. Plan. Unfortunately, it is no longer possible to identify the exact pit from which they came, but the statement that they were discovered among the decayed vegetable refuse of one of these repositories is confirmed by the condition of the metal of both objects. The field in question did not contribute in so large a measure to the Newstead collection as some of the other areas, but the finds which came from it indicated that most, if not all, of its pits dated from the first-century occupation of the fort. No. 1, which is the only example of a fibula recovered from the Newstead rubbish-pits, undoubtedly belongs to that period. A brooch of a different type came from the ditch of the early fort, but otherwise these ornaments were almost entirely found near the surface. It is probable that the fibula illustrated in *A Roman Frontier Post*, pl. lxxxv. fig. 1, which has lost its catch-plate, was of the same pattern. The fibula is made of a single piece of metal; the spring has two coils, one on either side of the bow; the cord passes underneath. The catch-plate is solid. The foot terminates in a small round knob. It is a type derived from the brooches of the La Tène period, which continued in use well into the Roman era. In Germany it is found on various sites, among others at Hofheim.¹ In England the type occurs more commonly in the south: it is rare in the north. An example in which the bow is more moderately arched was recently found on the Romano-British site on Lowbury Hill. Mr Donald Atkinson,² in describing this brooch, notes that the knob on the bow, which is perhaps a reminiscence of the La Tène I. type, is apparently never found on pre-

¹ Ritterling, *Das frühromische Lager bei Hofheim*, Taf. ix.

² Atkinson, *The Romano-British Site on Lowbury Hill, Berkshire*, p. 31.

Roman specimens of this class. Another example was found at Wroxeter in 1914, and there are three others in the Museum at Colchester. Mr Atkinson hazards the opinion that the imperfect specimen found at Newstead, already cited, in view of its high-arched almost angular bow, is an importation from Germany. The chief interest of the find lies in the fact that it supplies us with a complete example of the earliest type of brooch discovered in the course of the Newstead excavations.

The spoon, No. 2, which was probably employed for medical purposes, is not a new feature among the Newstead finds. An example came from Pit lxxxv., and is illustrated (*op. cit.*) in pl. lxxiii. fig. 6.

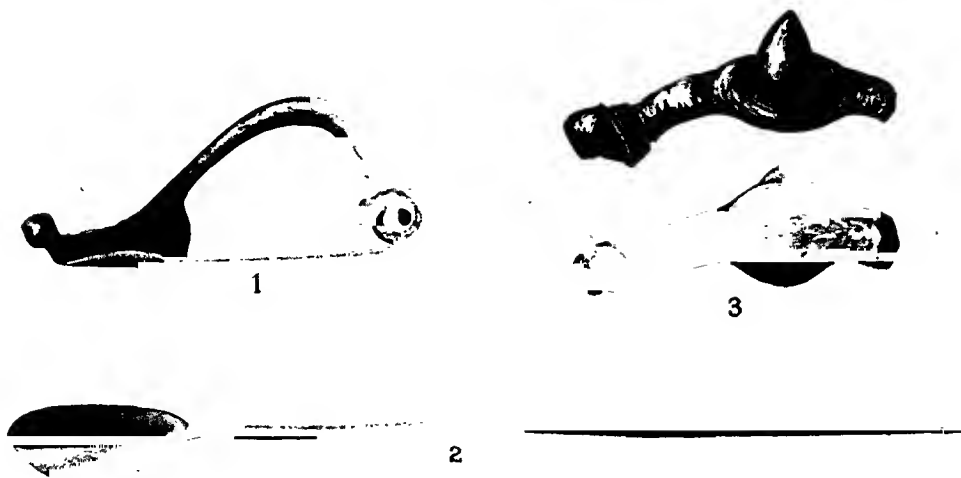


Fig. 1. Fibula, spoon, and spur of bronze from Newstead. $\frac{1}{2}$.

From among the debris of small fragments of decayed bronze which accumulate day by day in the excavation of a Roman site, Mr A. O. Curle has recovered the two further objects which follow; both of these add new features to the Newstead collection. Fig. 1, No. 3, is a small bronze spur, showing some remains of the leather thong or strap, which attached it to the boot. These small spurs have been met with before on Roman sites. An example is illustrated among the finds from Novesium, but they are none the less a familiar feature of the La Tène civilisation. M. Déchelette¹ illustrates examples from such widely separated localities as Stradonitz in Bohemia, where they were numerous; from Trugny in France; and from Northern Germany. In all of these

¹ *Manuel d'archéologie préhistorique*, "Époque de La Tène," p. 1202, fig. 514.

the actual spur consists of a sharp, thorn-like point. In the Newstead example, as in the majority of those figured by M. Déchelette, the flattened segment of metal, which was placed against the boot, terminated at the ends in buttons to which a leather thong was attached; in other examples the place of these was taken by rings. The spurs found on the Continent are made both of bronze and iron. From various finds it would appear that in early times spurs were worn singly and not in pairs.

Fig. 2 is an ox-goad. This has been formed by coiling a strip of iron twice spirally to form a socket, the end being brought to a sharp point by filing. It would then be fixed upon a long rod. Similar objects have been found on the village sites at Rotherley and Woodyates; Lowbury has produced several examples; while one has recently been found at Traprain.¹ Their presence would appear to give an indication of teams employed in cultivation.



Fig. 2. Ox-goad from Newstead. 1.

¹ *Proceedings*, xlix. p. 188.

LIST OF PREHISTORIC¹ RELICS FOUND IN MIDLOTHIAN, AS EXCERPTED FROM THE CATALOGUE² OF THE NATIONAL MUSEUM OF ANTIQUITIES, EDINBURGH, BEING AN APPENDIX TO THE CHALMERS-JERVISE PRIZE ESSAY FOR 1916: TO WHICH HAS BEEN ADDED A LIST OF OTHER ANTIQUITIES RELATING TO HISTORIC TIMES, ALSO PRESERVED IN THE MUSEUM. COMPILED BY Miss E. D. DENNISON.

PREHISTORIC RELICS.

OBJECTS OF FLINT AND STONE.

Catalogue
Reference.*Knife-like Implements of Flint.*

- A A 128. Knife of grey flint, triangular in form, $2\frac{1}{2}$ in. \times 2 in., its longest side carefully ground to a cutting edge; from Whooplaw, Stow; found in 1903. Purchased 1913.
- A A 187. Narrow, leaf-shaped implement, 5 in. \times $1\frac{1}{2}$ in., worked to an edge all round: said to have been found on the Pentlands.
- A A 189. Pointed implement of chert, 2 in. \times $1\frac{1}{2}$ in., from Penicuik. Purchased 1900.

Arrow and Spear Heads of Flint.

- A D 584. Arrowhead, barbed and stemmed, from West Mains. West Calder.

Stone Axe Heads.

- A F 11. Axe of sandstone, $10\frac{1}{2}$ in. \times 4 in., lower part polished, from Fala. Mrs John Scott, 1865.
- A F 78. Axe of felstone, $3\frac{1}{2}$ in. \times 2 in., from East Bonnington Mains. Prof. Daniel Wilson, 1863.
- A F 108. Axe of clay ironstone, $3\frac{3}{4}$ in. \times 2 in., flat, from Ratho. Prof. D. Wilson, 1863.
- A F 116. Lower portion of axe of greenstone, from Duddingston, Edinburgh. A. Kerr, 1860.
- A F 147. Cutting end of axe of greenstone, from Dalhousie Mains. J. Horsburgh, 1852.
- A F 148. Axe of felstone, $4\frac{1}{2}$ in. \times $2\frac{1}{2}$ in., from Redhall, Edinburgh. Mr Inglis.
- A F 248. Axe of greenstone, 3 in. \times $1\frac{3}{4}$ in., from Ratho. Purchased 1884.
- A F 258. Axe of greenstone, 7 in. \times $2\frac{3}{4}$ in., cutting edge worn and rounded, from Hermiston. Purchased 1884.
- A F 262. Axe of quartz, $2\frac{3}{4}$ in. \times $1\frac{3}{4}$ in., cutting edge imperfect, from Penicuik. Purchased 1884.
- A F 269. Axe of claystone, $6\frac{7}{8}$ in. \times $2\frac{7}{8}$ in., slightly chipped on each end, from Craigmillar. Purchased 1885.

¹ For the purposes of the Essay, "prehistoric" was interpreted as applying to any period prior to 1100.

² A few objects have been omitted which had formerly been withdrawn from exhibition.

LIST OF PREHISTORIC RELICS FOUND IN MIDLOTHIAN, ETC. 235

- | Cat. Ref. | |
|-----------|--|
| A F 317. | Axe of claystone, $4\text{ in.} \times 2\frac{1}{16}\text{ in.}$, polished, from East Calder, near the River Almond. Purchased 1888. |
| A F 413. | Axe of greenstone, $9\frac{1}{2}\text{ in.} \times 3\frac{1}{2}\text{ in.}$, with smoothed surface, side sharp, butt imperfect, found in the Esk at Roslin. Purchased 1893. |
| A F 414. | Axe of weathered felstone, $5\frac{1}{2}\text{ in.} \times 2\frac{3}{4}\text{ in.}$, with point of butt broken off, surface rough, found at Clubbiedean, Pentlands. Purchased 1893. |
| A F 416. | Axe of veined slate, $4\frac{1}{4}\text{ in.} \times 2\frac{1}{4}\text{ in.}$, polished, cutting end slightly imperfect, found at Royston Park. Robert Carfrae, 1894. |
| A F 617. | Axe of indurated sandstone, $4\frac{1}{4}\text{ in.}$ long by $2\frac{3}{4}\text{ in.}$ across cutting face, found at Manricewood. Purchased 1911. |
| A F 622. | Polished axe of dark marble-like stone, $5\frac{1}{4}\text{ in.}$ in length, 3 in. across the cutting face, sides flat, found at Hillend, Penicnik. Purchased 1912. |

Perforated Stone Axes, Hammers, etc.

- | | |
|----------|---|
| A H 16. | Wedge-shaped hammer or maul of sandstone, $9\frac{1}{2}\text{ in.} \times 4\text{ in.} \times 3\text{ in.}$, from Leith. Dr D. H. Robertson, 1862. |
| A H 55. | Hammer of greenstone, $9\frac{1}{4}\text{ in.} \times 4\text{ in.}$, imperfect at the butt, from Roslin. Purchased 1883. |
| A H 59. | Wedge-shaped hammer of whinstone, $9\frac{1}{2}\text{ in.} \times 4\text{ in.} \times 3\text{ in.}$, imperfect, from West Calder. A. Lumsden, 1885. |
| A H 65. | Axe-hammer of felstone, $5\frac{1}{2}\text{ in.} \times 1\frac{3}{4}\text{ in.}$, haft-hole at right angles to the cutting edges which are blunt, from Inveresk. Purchased 1886. |
| A H 91. | Hammer-head of whinstone, $13\frac{1}{4}\text{ in.} \times 5\frac{5}{8}\text{ in.}$, rudely formed, perforated, from Eskhill, Roslin. Purchased 1889. |
| A H 93. | Axe-hammer of weathered porphyritic stone, $4\text{ in.} \times 1\frac{1}{2}\text{ in.}$, with haft-hole through the flat face, from Cobbinshaw Loch, West Calder. William Prentice, 1890. |
| A H 116. | Perforated hammer of greenstone, $4\frac{1}{16}\text{ in.} \times 2\frac{1}{2}\text{ in.} \times 2\text{ in.}$, from Remote, Cranston. The Earl of Stair, K.T., etc., 1899. |
| A H 146. | Perforated hammerstone of gabbro, $5\frac{5}{8}\text{ in.}$ in length, $2\frac{3}{4}\text{ in.}$ in breadth across the centre, perforations made from both sides, found on Craigend Farm, Parish of Stow. Bequeathed by William Steele, F.S.A. Scot., 1917. |

Whetstones, Polishers, etc.

- | | |
|----------|---|
| A L 40. | Sharpening stone of micaceous schist, from Salisbury Crags. John Blair, 1871. |
| B G 217. | Piece of sandstone which has been used as a polisher, $2\frac{1}{2}\text{ in.} \times 2\frac{1}{2}\text{ in.}$, found in Carrington Churchyard. Alan Reid, 1909. |

Stone Implements. Perforated.

- | | |
|---------|--|
| A O 1. | Perforated disc of sandstone, oval, 3 in. in diameter, found near Corstorphine. Rev. R. K. D. Horn, 1879. |
| A O 94. | Oval disc of greenstone, $3\text{ in.} \times 2\text{ in.}$, perforated from both sides, from Castlelaw, Pentlands. |

Ornamented or Polished Stone Balls.

- | | |
|---------|--|
| A S 16. | Ball of clay ironstone, $2\frac{1}{2}\text{ in.}$ diameter, with four circular discs, from the Water of Leith. John Henderson, 1878. |
|---------|--|

236 LIST OF PREHISTORIC RELICS FOUND IN MIDLOTHIAN, ETC.

Cat. Ref.	<i>Stone Whorls.</i>
B E 71.	Of red sandstone, $1\frac{1}{8}$ in. diameter, elaborately ornamented, from Gourlaw, Roslin. R. Brockly, 1871.
B E 176.	Of sandstone, $1\frac{3}{8}$ in. diameter, imperfect, from Norton, Ratho. Linn Collection.
B E 178.	Of sandstone, $1\frac{1}{4}$ in. diameter, with two concentric circles, from Saughton Hall, Edinburgh. Linn Collection.
B E 280.	Of sandstone, small and flat, from Gogar Burn. Purchased 1898.
B E 367.	Of brown sandstone, $1\frac{1}{4}$ in. diameter, from Balerno. Purchased 1909.
B G 181.	Mould of claystone, $4\frac{1}{2}$ in. \times $2\frac{1}{4}$ in., from Stow. Purchased 1900.

OBJECTS OF BRONZE.

Bronze Flat Axes.

D A 2.	Axe, 6 in. \times $3\frac{1}{2}$ in., from Mountskip, Vogrie. Mrs Dewar, 1846.
D A 6.	Axe, 7 in. \times $3\frac{1}{2}$ in., with traces of tinning, from Ravelston, near Edinburgh. Alex. Keith, 1784.
D A 7.	Axe, $13\frac{3}{8}$ in. long, weighing 5 lbs. 7 oz., from Lawhead, Pentland Hills. John Cowan, 1867.
D A 30.	Axe, 6 in. \times $3\frac{3}{4}$ in., from Northplot Hill, near Ratho. Captain A. C. Maitland, 1796.

Bronze Flanged Axes.

D C 40.	Axe, $4\frac{1}{2}$ in. \times $2\frac{1}{2}$ in., with slight flanges, from Midlothian. Dr D. Wilson, 1863.
D C 86.	Three axes (86), $6\frac{3}{8}$ in. \times $2\frac{3}{4}$ in., with sharply defined stop ridge, from Corstorphine. Purchased 1905.

Bronze Socketed Axes.

D E 7.	Axe, 3 in. \times $2\frac{1}{4}$ in., imperfect, found near Edinburgh. Purchased 1881.
D E 9.	Axe, $3\frac{1}{2}$ in. \times $1\frac{3}{8}$ in., with three raised lines on each side, found in Leith. D. Stevenson, C.E., 1877.
D E 10.	Axe, $2\frac{7}{8}$ in. \times 2 in., from Graham's Mount, near Penicuik. Dr Brewster, 1819.
D E 16.	Axe, $3\frac{1}{2}$ in. \times $1\frac{3}{4}$ in., from Arthur's Seat. Dr D. Wilson, 1863.
D E 17-19.	Axes, viz.—(17) $3\frac{1}{2}$ in. \times $1\frac{1}{2}$ in., with parallel lines on the sides; (18) 5 in. \times $2\frac{1}{8}$ in., ornamented by parallel lines, without loop; (19) $3\frac{1}{2}$ in. \times 2 in., from Bell's Mills, Dean, Edinburgh. Purchased 1865.
D E 35, 36.	Axes, viz.—(35) $3\frac{1}{2}$ in. \times $1\frac{1}{2}$ in., edge broken; (36) $2\frac{3}{4}$ in. \times $2\frac{3}{8}$ in., imperfect, both found in Leith. Dr D. H. Robertson, 1866.
D E 68.	Axe, $3\frac{1}{16}$ in. \times $2\frac{3}{16}$ in., found near Tynehead. Purchased 1909.

Bronze Spear-heads.

D G 33.	Spear-head, $3\frac{1}{4}$ in. long, point broken, rivet-holes in the socket, found near Edinburgh. Purchased 1881.
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LIST OF PREHISTORIC RELICS FOUND IN MIDLOTHIAN, ETC.* 237

Cat. Ref.

- D G 71, 72. Spear-heads, 11 in. long and $10\frac{1}{2}$ in. long, with rivet-hole through socket, found in excavating at Murrayfield. Purchased 1892.

Bronze Blade.

- D I 4. Blade, tanged and oval-shaped, $2\frac{3}{4}$ in. \times $1\frac{1}{4}$ in., imperfect, ornamented with pattern of incised lines, found in urn (E A 41) near Joppa. William Lowson, 1882.

Bronze Dagger Blades.

- D J 26, 27. (26) Rapier-shaped blade, $18\frac{3}{4}$ in. in length, with one large rivet: (27) rapier-shaped blade, 15 in. in length, very narrow, both from Midlothian. Duns Collection. Purchased 1903.

Bronze Leaf-shaped Swords.

- D L 6, 7. Sword, $21\frac{1}{4}$ in. long, imperfect at point, rivet-hole in each wing and two in hilt-plate, and (7) bronze scabbard tip, found with gold ornament (F E 7) and bronze penannular brooch (F C 153) in digging a gravel pit at Gogar Burn. Mrs Bell, 1866.
- D L 47-49. Swords, viz.—(47) leaf-shaped, 17 in. long, greatest breadth $1\frac{5}{8}$ in., with two rivet-holes and broken butt, from Midlothian (Duns Collection. Purchased 1903): (48) leaf-shaped, 20 in. long and $1\frac{3}{8}$ in. broad, with two rivet-holes in wings and two in grip, from Midlothian (Duns Collection): (49) sword, $17\frac{3}{4}$ in. long, with five rivet-holes found in removing an old house in Edinburgh. D. J. Macfie, of Borthwick Hall, 1909.
(See also D Q 199-201.)

Bronze Implements, Ornaments, etc.

- D O 5. Conical ferrule, 3 in. long, found near Edinburgh. Purchased 1881.
- D O 8. Implement, $3\frac{1}{2}$ in. in length, with two semicircular blades, from Kinkleith, Currie. Dr J. A. Smith, 1863.
- D O 36. Socketed gonge, broken, $2\frac{1}{4}$ in. long, $\frac{3}{8}$ in. across cutting edge, found near Tynehead. Purchased 1909.

Hoard of Bronze Articles.

- D Q 1-44. Ring of large caldron, fragments of spear-heads, swords and dagger-blades, found with human remains and bones of animals in Duddingston Loch, in 1780. Sir Alexander Dick, 1780.
- D Q 89-91. From Arthur's Seat, viz.—(89) socketed axe, $3\frac{5}{8}$ in. \times $2\frac{3}{8}$ in., with two parallel lines round neck: (90, 91) swords, $24\frac{1}{2}$ in. and 26 in. long. Treasure Trove, 1846.
- D Q 199-204. Three bronze swords and other objects found together in Grosvenor Crescent, Edinburgh, in 1869, viz.—(199) sword, $19\frac{7}{8}$ in. long, rivet-hole in each wing and one in hilt-plate, point broken off; (200) sword, $21\frac{7}{8}$ in., point and greater part of handle-plate broken off, two rivet-holes in each wing, one with rivet (Presented by Andrew Waddell in 1879); (201) sword of cast bronze, $20\frac{1}{4}$ in. long, blade alone $15\frac{3}{8}$ in. and its greatest width $1\frac{1}{2}$ in., hilt ridged, and with three pin-holes, pommel $2\frac{1}{8}$ in.

wide and with two holes on opposite sides (Purchased 1898); (202) broken bronze pin with flat circular head, $1\frac{1}{8}$ in. diameter, ornamented with concentric circles; (203) hollow circular button or belt mounting with loops underneath, $1\frac{3}{8}$ in. diameter; (204) bronze ring, $3\frac{1}{8}$ in. external diameter and $\frac{3}{16}$ in. thick, in three pieces (Purchased 1898).

URNS.

Cinerary Urns.

- | | |
|---------------|---|
| Cat. Ref. | |
| E A 3. | Urn. 12 in. x 11 in., containing burnt bones, found with unburnt bones in a cist in Saxe-Coburg Place, Edinburgh. Joseph Gordon, 1823. |
| E A 9. | Urn. $11\frac{1}{2}$ in. x 10 in., with overhanging rim, from Dean Bridge, Edinburgh. A. D. Hay, 1827. |
| E A 12. | Urn. 13 in. x $12\frac{1}{2}$ in., from Torcraik, Borthwick, Midlothian. Earl of Buchan, 1815. |
| E A 22, 23. | Urns (restored), found inverted at Arniston. Robert Dundas, 1860. |
| E A 25. | Urn. 8 in. x $5\frac{1}{2}$ in., with overhanging rim, from Windy Goul, Arthur's Seat. Commissioners of H.M. Works, 1856. |
| E A 37-45. | From a Bronze Age cemetery at Magdalen Bridge, Joppa, viz.—(37) $12\frac{1}{4}$ in. x 9 in.; (38) $10\frac{1}{2}$ in. x $7\frac{1}{2}$ in.; (39) 16 in. x $12\frac{1}{2}$ in.; (40) $13\frac{3}{4}$ in. x 10 in.; (41) 12 in. x $9\frac{1}{2}$ in.; (42) 13 in. x 11 in.; (43) 12 in. x $8\frac{1}{2}$ in.; (44) fragment of rim; (45) two fragments of rim and body of urn. Dr C. W. Cathcart. William Lowson, and Charles Gordon, 1882. |
| E A 48. | Bottom portion of urn, $7\frac{1}{2}$ in. high, $3\frac{1}{2}$ in. diameter, found near Dalkeith. |
| E A 53, 54. | Urns, viz.—(53) $8\frac{1}{4}$ in. x $6\frac{1}{4}$ in.; (54) 12 in. x 9 in., from Blacklaw Knoll, Saughland Farm, Ford. William Ronaldson, 1829. |
| E A 57. | Urn. $3\frac{1}{2}$ in. x 4 in., from Boroughmuirhead, Edinburgh. R. A. Veitch, 1866. |
| E A 117. | Urn. 11 in. x $8\frac{1}{4}$ in., ornamented round the rim by line of zigzag ornament and seven horizontal lines, found filled with calcined bones at Musselburgh. George Lowe, 1887. |
| E A 123, 124. | Urn. 11 in. x $8\frac{1}{2}$ in., ornamented on outside of rim with lozenge-shaped patterns, etc., and fragments of another large urn, from Shandon Crescent, Edinburgh. Geo. Macdonald, 1891. |
| E A 143-151. | Collection of nine urns from Kirkpark, Musselburgh, found with E C 29-33. Treasure Trove, 1894. |
| E A 153. | Urn. 15 in. x $11\frac{3}{4}$ in. x 4 in., found at Juniper Green, along with E E 78, 79. Messrs Wm. Cowie & Son, 1898. |
| E A 154, 155. | Urns, viz.—(154) probably 17 in. in height, $11\frac{3}{4}$ in. across the mouth, 15 in. at shoulder, $3\frac{1}{2}$ in. at base, ornamented with triangular spaces filled in with vertical and oblique lines; (155) $5\frac{3}{4}$ in. in height, $5\frac{1}{2}$ in. wide across the mouth, and 3 in. at the base, ornamented with crossed lines and a row of oblique sharp lines, from Braid Hills. W. Anderson, 1899. |
| E A 164-166. | Urn, $14\frac{3}{8}$ in. x $12\frac{1}{4}$ in. and $4\frac{3}{4}$ in. x $4\frac{1}{2}$ in., and small perforated pendant of bone, found with incinerated bones in the larger urn, from a cairn in the Stackyard Field, Gourlaw, Midlothian. J. M. Brockley, 1905. |

LIST OF PREHISTORIC RELICS FOUND IN MIDLOTHIAN, ETC. 239

Cat. Ref.

Small Cup-shaped Urns.

- E C 11. Cup, $1\frac{1}{2}$ in. \times $2\frac{3}{4}$ in., ornamented, from Arthur's Seat. Professor D. Wilson. 1863.
E C 29-33. Urns found at Kirkpark, Musselburgh. 1895. (31) being unusual in form and very elaborate in ornamentation. Treasure Trove, 1894.

Urns of Food-Vessel Type.

- E E 4. Urn, $5\frac{1}{2}$ in. \times $5\frac{1}{2}$ in., with five projecting knobs, from Beechwood Mains, Corstorphine. Forbes Minto. 1862.
E E 10. Urn, $4\frac{1}{2}$ in. \times $5\frac{1}{4}$ in., from Shiell Loch, Torrcraik, Borthwick. Rev. Dr Jamieson. 1815.
E E 14. Urn, 5 in. \times $5\frac{1}{2}$ in., found beside a row of cists at Cramond, Midlothian.
E E 28. Urn, $5\frac{1}{2}$ in. \times 5 in., from Wardie, near Newhaven. Capt. Donaldson Boswell. 1832.
E E 77. Urn, $4\frac{1}{2}$ in. \times $5\frac{1}{4}$ in., doubly ribbed at bulge, and ornamented with numerous perpendicular lines of dots on the sides and lip, from Bellfield, Musselburgh. Treasure Trove, 1897.
E E 78, 79. Urns found at Juniper Green, $4\frac{1}{4}$ in. \times 6 in. \times $2\frac{1}{2}$ in., and $4\frac{1}{2}$ in. \times $5\frac{1}{2}$ in. \times $2\frac{3}{4}$ in. Messrs Wm. Cowie & Son. 1898.
E E 84, 85. Urns, viz.—(84) $5\frac{1}{4}$ in. in height, $5\frac{1}{4}$ in. in diameter at mouth, $6\frac{1}{2}$ in. at bulge, and $2\frac{3}{4}$ in. at base, which is distinctly stemmed, slightly decorated with irregular rows of dabbled points: (85) $3\frac{1}{2}$ in. in height, 5 in. diameter at mouth, and 3 in. at base, richly decorated with four bands of deeply dabbled points alternating with three bands of curved and triangular deeply marked impressions, from two cists found side by side at Succoth Place, Murrayfield. Purchased 1901.
E E 95. Fragments of urn from a cist found in North Merchiston Cemetery, Edinburgh. Edinburgh Cemetery Co., 1904.

Urns of Drinking-Cup Type.

- E G 3. Urn, $6\frac{1}{2}$ in. \times $5\frac{1}{2}$ in., found with skull (E T 33) at Juniper Green. Purchased 1851.
E G 12, 13. Urns, $6\frac{3}{4}$ in. \times $5\frac{1}{2}$ in. and $7\frac{1}{2}$ in. \times $6\frac{1}{2}$ in., from Cakemuir Hill, near Borthwick. John Borthwick. 1857.

Collections from Sepulchral Deposits.

- E Q 64. Hammer of greenstone, $4\frac{1}{2}$ in. long, perforated, from Pentland, Midlothian. Professor D. Wilson. 1863.
E Q 157-162. From Ratho, viz.—(157) urn of food-vessel type, $4\frac{1}{4}$ in. \times $5\frac{1}{4}$ in. ornamented: (158-162) fragments of bronze rings, etc.
E Q 185-188. From grave at East Langton, Midlothian, viz.—(185) iron dagger with wooden handle, $13\frac{1}{4}$ in. long: (186) iron knife-blade, $9\frac{1}{4}$ in. long: (187) perforated bone pin, $3\frac{1}{4}$ in. long: (188) portion of glazed earthenware. Dr Daniel Wilson, 1852.
E Q 274-277. From a cist containing a double burial, found on the Leath Hill, Moredun, near Gilmerton, viz.—(274) ring brooch of iron: (275) head of iron pin: (276) iron fibula: and (277) portion of skull and other bones. J. Welsh. 1904.

240 LIST OF PREHISTORIC RELICS FOUND IN MIDLOTHIAN, ETC.

Cat. Ref.	<i>Human Crania from Early Graves.</i>
E T 10.	From Stonelaws, Midlothian.
E T 33.	From Juniper Green. Purchased 1851.
E T 41-46.	From Leith. Dr D. H. Robertson, 1866.
E T 61.	Larger portion of skull and half of lower jaw, from Kirkpark. Musselburgh. George Lowe, 1888.

Personal Ornaments, etc. (Bronze with Celtic Ornamentation).

F A 35.	Sword sheath. $23\frac{1}{2}$ in. \times $1\frac{1}{4}$ in., with late Celtic ornamentation and raised loop in the middle, from Morton Hall. Pentland.
F A 77.	Penannular ring-brooch of bronze, $1\frac{5}{8}$ in. diameter, ornamented, from Barnton. Purchased 1911.
F A 78.	Spirally twisted armlet of bronze, extending to three complete coils, $2\frac{3}{4}$ in. in diameter over all, formed from a rod of bronze, pointed oval in section. The central coil of the spiral is treated with a segmental ornamentation on the outer surface, terminating at either end with a cross inside a panel. The rod slightly increases in thickness, and assumes a circular form towards the extremities which terminate with a moulding and a flattened spherical knob. Found while digging a gun emplacement on Wester Craiglockhart Hill. Presented by Lieut. J. D. Campbell, R.H.A., B.E.F., 1916.

Personal Ornaments, etc. (mostly with interlaced Ornamentation).

F C 153.	Penannular brooch of bronze, found with the sword (D L 6) and ornament (F E 7) at Gogar Burn. Mrs Bell, 1866.
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Ornaments of Gold, etc.

F E 7.	Small capsule of penannular form, found with sword (D L 6) and brooch (F C 153) at Gogar. Mrs Bell, 1866.
F E 45.	Cast of torc of two thick wires, spirally twisted, about 4 feet long, with long recurved and solid ends, found at Slateford.

Beads, Rings, etc., of Glass.

F J 99.	Bead of opaque, black, vitreous paste. $\frac{1}{16}$ in. \times $\frac{9}{16}$ in., having three large and six small white spirals, found at Gilmerton. Purchased 1909.
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Beads, Rings, etc., of Amber.

F L 12.	Bead of amber. $1\frac{3}{16}$ in. \times $\frac{1}{2}$ in., found in garden of Woodburn House, Canaan Lane, Edinburgh. J. B. Mears, 1907.
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Beads and Rings of Jet, Stone, etc.

F N 8.	Ring of jet, 2 in. diameter, from West Calder. Andrew Purdie, 1872.
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ROMANO-BRITISH RELICS.

Pottery, Glass Vessels, etc.

F R 88-123.	Articles found in a Roman villa at Inveresk, viz.—(88) vessel of black ware, 7 in. \times 8 in., imperfect; (89-101) fragments of various
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LIST OF PREHISTORIC RELICS FOUND IN MIDLOTHIAN, ETC. 241

Cat. Ref.

- vessels of black, grey, and Samian ware: (102-105) fragments of mortaria (one bearing potter's stamp—a branch and leaves); (106-109) rims of water-jars; (110, 111) pipe-tiles; (112) floor-tile; (113) figure of hand pressing grapes; (114-123) deer-horns and bones of animals. Adam de Cardonell. 1783. A. Handyside Ritchie, 1850, Admiral Sir A. Milne, 1865.
- F R 124. Vase of black ware, globular, $3\frac{1}{2}$ in. high. from Inveresk. J. Gavine, 1879.
- F R 125-179. Other articles found at Inveresk. viz.—(125-129) fragments of mortaria and other vessels of Samian ware: (130-146) fragments of rims of various vessels of black, red, and grey ware: (147-159) fragments of vessels of black, red, and grey ware: (160) mortarium of grey ware, imperfect, $13\frac{1}{2}$ in. diameter, with potter's mark—a fern leaf on rim; (161-167) fragments of rims of mortaria, several with potter's mark: (168) water-jar of reddish clay, $10\frac{1}{2}$ in. 8 in., imperfect; (169) dolium of reddish clay, 27 in. 22 in., imperfect: (170) vase of black ware, $4\frac{1}{2}$ in. $4\frac{1}{2}$ in., ornamented with dots in relief, imperfect: (171) dish of black ware, 4 in. high, $9\frac{1}{2}$ in. diameter, imperfect; (172-176) lower portions of vessels of black and grey ware: (177) coin of Trajan (second brass), denarius of Hadrian, gilt ornament, and fragment of glass: (178, 179) teeth of various animals. Thomas Proudfoot and William Stevenson, and purchased 1879.
- F R 185. Portion of Samian ware, from Cramond.
- F R 194. Red clay spoon, from Clifton, Edinburgh. P. F. Tytler, 1827.
- F R 213. Fragments of red and grey pottery, portion of silver coin, and fragment of small bronze ring, from Kaims, Midlothian. Sir William F. Douglas, 1882.
- F R 214. Vessel of red clay, 10 in. \times 9 in., tapering to the bottom, with band of painted ornament round the shoulder, from Raw Camp Lime Works, Mid-Calder. Countess Dowager Morton, 1827.
- F R 227-248. From Eskgrove, Inveresk, viz.—(227-229) fragments of Samian ware, one inscribed "VICTOR": (230-239) fragments of vessels of black ware, some with incised lines: (240) fragment of rim of mortarium: (241-243) fragments of red tiles; (244) fragment of side of dolium; (245) portion of rim and side of jar: (246) iron chisel-like implement; (247, 248) fragments of deer-horn, showing marks of cutting. Charles Stewart, 1892.

Ornaments, Implements, etc., of Bronze and Iron.

- F T 2-4. (2) Bronze patella; (3) penannular brooch: (4) clasp or handle, found at Longfanh, Crichton. The Earl of Stair, 1863.
- F T 11. Bronze strigil, found near Cramond.
- F T 22. Bronze stamp inscribed TVLLIÆ TACITÆ, from Carrington.
- F T 39, 40. Bronze lamp and bronze eagle, from Currie, near Borthwick, 1831.
- F T 41. Fragments of iron implements, from Midfield Mains, Inveresk. W. Stevenson, 1879.
- F T 65. Roman bronze stamp, $2\frac{3}{8}$ in. \times $1\frac{7}{16}$ in., with projecting ring-handle TERTVLL PROVINC, found at Cramond; from the collection of Sir John Clerk of Penicuik. W. Moir Bryce, 1909.

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- Altars and Inscribed Stones.*
- Cat. Ref.
 F V 15. Legionary stone, 11 in. \times 6 in., inscribed LEG · II · AUG · FECIT, from Cramond. Sir George Clerk.
 F V 22. Altar, inscribed I · O · M · COH · V · GALL CVI PREEST I MINEHONVS TERTVLLVS PRAEF V · S · L · L · M., etc., from Cramond. The Faculty of Advocates.
 F V 28. Portion of hypocaust of Roman villa, found in 1783, near Inveresk.
 F V 31. Sculptured stone in shape of pine cone, 20 in. high, from Midfield Mains, Inveresk. William Stevenson, 1879.

- Collections from Brochs.*
- G A 382. Portions of large vessels of yellow pottery (Roman) from Broch of Bow, Midlothian. James Curle, 1892.

- Miscellaneous Collections from Refuse-Heaps, etc.*
- H R 15-39. Bones and teeth of animals, shells, vitrified matter, etc., from crag above Dunsapie Loch. J. Chalmers and J. Anderson, 1872.

- Rock Sculptures, Cup-marked Stones, etc.*
- I A 23. Block of whinstone, 12 in. \times 13 in., with twelve cup markings on one face, from Saughtonhall, Edinburgh. Dr J. B. Tuke, 1895.
 I A 25. Sandstone fragment, 5 in. \times 4½ in., with two cup marks and part of a third, from upper packing of a cist at Ratho Quarry, 1898.
 I A 29. Cup-and-ring-marked stone, 2 ft. 10½ in. \times 1 ft. 9 in. \times 10½ in., found on the Braid Hills in 1897, and presented by the Edinburgh Corporation, 1902.

RELICS FROM HISTORIC TIMES.

- Sculptured Monuments, Crosses, etc.*
- I B 1. Stone, 48 in. \times 27 in. \times 8 in., with incised figure of crescent and V-shaped sceptre, etc., found near the Well-house Tower in Princes Street Gardens, Edinburgh. Proprietors of the Gardens, 1861.
 I B 20, 21. Portions of sculptured stones, viz.—(20) of red sandstone, 16 in. \times 11 in. \times 4 in., with figure of animal having its tail raised over its back; (21) the right limb of an ornamented cross in sandstone, 12 in. \times 8 in. \times 5 in., having on one side the right hand of a crucified figure, on the other dragonesque sculpture, both found in the ruins of old church, Lasswade. William Gunn, 1867.
 I B 29. Portion of shaft of sculptured cross, 28 in. \times 14 in. \times 6 in., covered with interlaced work, from Liberton Tower, near Edinburgh. R. P. Scott, 1863.
 I B 129. Block of sandstone, 15 in. \times 12½ in., being top part of cross, ornamented on each face with figure of cross in relief within circle, from the churchyard of Mid-Calder. Gilbert Goudie, 1883.
 I B 146. Slab, sculptured, from Borthwick.
 I B 180. Sculptured lintel, 3 ft. 7 in. \times 1 ft. 5 in., with shield and supporters, from a house in Leith. T. Ross, 1896.

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- Cat. Ref.
I B 181. Sculptured arch-stone, 4 ft. 4 in. × 1 ft. 3½ in., with central shield having a crucifixion in high relief, from an old house in High Street, Edinburgh. T. Ross.

Crucifixes. Reliquaries, etc.

- K E 8. Crucifix, said to have been found near St Anthony's Chapel, Queen's Park, Edinburgh. Purchased 1884.

Sculptures, Carvings, etc., in Stone.

- K G 5. Sculpture in alabaster of Christ before Pilate, found in ruins of convent of St Mary of Placentia, which formerly stood in Pleasance, Edinburgh. David Deuchar, 1781.
K G 13. Cast of monogram on shield, from pillar in Trinity College Church, Edinburgh.
K G 22. Stone, displaying shield with armorial bearings and winged figures for supporters, found under pavement in Young Street, Edinburgh. Thomas Stevenson, C.E., 1860.
K G 35. Finely-sculptured group representing death-bed scene, found in foundations of house at Mary King's Close, Edinburgh. Messrs Wyllie and Peddie, 1864.
K G 37-39. Sculptured ambries from Queen Mary of Guise's House, Blyth's Close, Edinburgh.
K G 41. Sculptured stones from house in Netherbow, Edinburgh, showing male and female bust, between which is the inscription in Gothic letters—IN · SUDORE · VULTUS · TUI · VESCERIS · PANE · TUO.
K G 42. Stone, showing armorial bearings, from old house in High Street, Edinburgh.
K G 43. Lintel of door from house in Gosford's Close, Edinburgh, with inscription—SOLI · DEO · HONOR · ET · GLORIA ·, and below, three shields: on the centre one is the crucifixion: on right, a merchant's mark between letters M.T.: and on left, boar's head couped with two crescents in chief.
K G 82. Portion of stone moulding bearing the date 1680, from old house in Edinburgh. Purchased 1884.
K G 87. Sculptured stone from Leith, with legend, NOSTRA FRATERNITAS · VIRGINITAS · ET · VNITAS, surrounding a head. Mr Johnson, per Thomas Ross, 1904.

Miscellaneous.

- K J 20, 21. Punch and token (1795) of Edinburgh Berean Church. James Bayne, 1874.
K J 23. Head and hand of child in white wax, found in walled-up niche in Queen Mary of Guise's House, Blyth's Close, Edinburgh. E. W. D. Hay, 1829.
K J 37. Sand-glass from parish church of West Calder.
K J 40. Stand for sand-glass from St Cuthbert's Church, Edinburgh. Kirk Session, 1863.
K J 43, 45. Brackets of wrought iron for baptismal basins from Inveresk, and St Cuthbert's Church, Edinburgh. J. and P. Nimmo, 1869.
K J 52. Collecting ladle, from old parish church of Temple, Midlothian. Purchased 1881.

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Cat. Ref.

- K J 77. Communion plate, in pewter, 16 $\frac{3}{8}$ in. diameter, with Edinburgh pewterer's mark on bottom, and initials I.H. Purchased 1890.
- K J 623. Collecting ladle from West Calder Church. J. G. Fairly, 1897.
- K J 641. Hand-bell, 5 $\frac{1}{2}$ in. high, 3 $\frac{3}{4}$ in. in diameter at mouth, inscribed as follows:—"Part of the GREAT BELL of the TRON CHURCH, Edinburgh, destroyed by fire 16th December 1824. On the Great Bell was inscribed—"John Clyfton made mee 1633." Presented by James W. Dunlop, through Mr Robert Hepburn, 1899. *Proc.*, vol. xxxiii. p. 405.

Wood Carvings, etc.

- K L 1. Old oaken pulpit, said to be from St Giles's Church, Edinburgh. R. Johnston, 1826.
- K L 3. Folding camp-stool dated 1565, asserted by the donor to have been "used in the High Kirk of Edinburgh by Jenny Geddes." J. A. Watson, 1818.
- K L 4. Portion of cornice in oak, on which is cut in relief 16 · FOR · THE · CRAIG · END · 56. · from pew in South Leith Church. Dr D. H. Robertson, 1862.
- K L 5. Oval shield, with arms of Incorporated Trades of Dalkeith, and "WE LIVE BY GOD'S PROVIDENCE." from front of gallery in parish church, Dalkeith.
- K L 17. Mahogany stile of door, from Old Assembly Rooms, West Bow, Edinburgh.
- K L 38. Oak door from house of Mary of Guise in Blyth's Close, Edinburgh.
- K L 44. Royal Arms and supporters, in carved wood, gilt, time of George III., from Council Chambers, Edinburgh.
- K L 45-47.¹ Portions of painted ceiling, from house of Mary of Guise in Blyth's Close. Directors of Commercial Bank, 1845.
- K L 50. Carved oak window frame and shutters, from old house in Water Lane, Leith, known as "Mary of Guise's House." James Heddle, 1875.
- K L 51. Oak window frame and shutters, forming lower half of window, from old house in Cowgate called the French Ambassador's House, Edinburgh. Purchased 1851.
- K L 55. Wooden figure, formerly over shop door in West Bow, Edinburgh. Miss Burns, 1846.
- K L 62. Window frame and shutters from old house in Edinburgh.
- K L 63. Large carved oak door with panels and cornice, from Mary of Guise's house, Water Lane, Leith. C. K. Sharpe's Collection. Purchased 1851.
- K L 64. Portion of panel, displaying bunches of grapes, from Mary of Guise's House, Blyth's Close.
- K L 68-72.¹ Painted panels of scriptural subjects, from ceiling of great hall, Dean House, Edinburgh. C. K. Sharpe's Collection. Purchased 1851.

ARMS AND ARMOUR.

Swords.

- L A 83. Sword, broken, 18 in. long, from foundations of a house at Portobello. A. Linn, 1901.
- L A 91. Hilt end of iron sword, found at Holyrood. Alan Reid, 1908.

¹ Incorrectly numbered in current Catalogue, 1892.

Cat. Ref

Long-shafted Weapons.

- L E 1, 2. Lochaber axes used by Old Town Guard. Edinburgh. Town Council. 1849.
 L E 3, 4. Lochaber axes used by Edinburgh Town Guard.
 L E 9-10. Lochaber axes formerly used by Old Town Guard. Edinburgh Town Council. 1849.
 L E 58. Arrow or bolt head from Craigmillar Castle.
 L E 73. Pike-head made by John Orrock. Water of Leith, at the time of the "Friends of the People." Miss Walker. 1841.
 L E 84. Iron pike-head with hook and transverse point, from foundation of a house in Portobello. A. Linn, 1901.
 L E 85. Halberd of iron, 26 in. × 8 in., recovered from Holyrood after a fire. Theodore Napier. 1909.

Banners and Flags.

- L F 2. Covenanters' flag, displaying white saltire, with roses in the centre, and the inscription FOR RELIGION, COVENANTS, KING AND KINGDOMS, said to have been carried at Battle of Bothwell Brig, 1679, and again in 1745 by corps of volunteers in Edinburgh. Christopher Mowbray, 1796.
 L F 4. Banner with saltire in upper corner, thought to be original "Blue Blanket" from City Chambers, Edinburgh. Town Council. 1850.
 L F 9, 10. Two flags of the first regiment of the Royal Edinburgh Volunteers, which were presented to the regiment by Sir James Stirling, Lord Provost, in 1794. Bequeathed by the late T. B. Johnston, 1898.

Bows and Cross-bows.

- L G 5. Cross-bow from Craigmillar Castle. Purchased 1860.

Firearms.

- L H 41-43. Muskets used by Old Town Guard, Edinburgh. Two presented by Town Council. 1849.
 L H 209. Model of "Mons Meg," in iron, on wooden carriage, copied from sculptured lintel in Edinburgh Castle. J. Mackinlay, 1860.

Miscellaneous.

- L M 5, 6. Lead bullets from Rullion Green. James Jackson, 1848.
 L M 21. Cannon ball, 4 in. diameter, fired into Mary of Guise's House at Leith, found in 1890. Theodore Napier. 1909.

Armour.

- L N 16. Chain armour found at Old Liston, Midlothian, 1860.

Floor Tiles, etc.

- L R 14. From Crichton Castle. Mr Fairgrieve, 1869.
 L R 31-34. Dutch glazed and ornamented tiles from old houses in Edinburgh. Purchased 1883.

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{Cat. Ref.

- L R 36-38. Old Dutch tiles from old houses in Edinburgh. viz.—(36, 37) from Major Weir's house. West Bow : (38) from old house in Lawnmarket. J. W. Small, 1887.
L R 63-66. Tiles with floral patterns, from house of Sir John Smith of Grotham, Lord Provost of Edinburgh, 1650. H. H. Norie, 1892.

Musical Instruments.

- L T 4. Drum-case with Royal Arms and C.R. II., from Old City Chambers, Edinburgh.
L T 13-22. Trumpets and bugles, etc., which belonged to corps of Edinburgh Volunteers in 1800. James Johnstone, 1851.
L T 23, 24. Drums used by Old Town Guard of Edinburgh.

Ewers, Flagons, Measures of Brass, etc.

- M C 7. Flagon with three feet, $8\frac{1}{2}$ in. high, found near Dalkeith. Purchased 1853.
M C 26. Flagon with three feet, of brass, found in digging foundations of South Bridge, Edinburgh.
M C 37. Pewter measure stamped with date 1669, found in taking down the North Bridge, Edinburgh. Purchased 1895.

Kitchen and Table Utensils, etc.

- M E 5. Quaich of fir, found in Diamond Coal Mine, near Inveresk. Robert Bald, 1828.
M E 19. Tankard of wood, with brass hoop, inscribed EDINBURGH.
M E 50. Jar, with loop handle, 6 in. high, found under foundation of house in Leith. Dr R. Paterson.
M E 62. Wooden cup or platter found above the ceiling in Mary of Guise's House, Blyth's Close.
M E 96. Teaspoon inscribed K.A. BORN DEC. ii. 1716. dug up in West Bow, Edinburgh.
M E 118, 119. Knife-blades from old house in West Bow, Edinburgh.
M E 133. Linen-smoother of black glass, $5\frac{1}{2}$ in. diameter, with handle $7\frac{1}{2}$ in. long, from Edinburgh. J. Romilly Allen, 1881.
M E 277. Tablespoon, silver, with Edinburgh hall-mark of 1704. inscribed M.D. and I.C. Mrs Dingwall, 1893.
M E 280. Fork, silver, with Edinburgh hall-mark of 1698, with crest and motto "suffer. suffer." Mrs Dingwall, 1893.
M E 289. Small mediæval jar with handle and perforations through the sides, found filled with coins of Alexander III., Edward I., and Edward II., at Eastfield, Penicuik. Purchased 1891.
M E 339. Silver spoon with Canongate hall-mark and dated 1589. Purchased 1902.
M E 403. Cup of iron, $3\frac{1}{4}$ in. diameter, with flat handle, from Corstorphine. G. J. Ewen Watson, 1910.
M E 431. Silver rat-tail spoon with trefoil head, $7\frac{3}{8}$ in. in length, Edinburgh hall-mark, 1701; Assay Master, James Penman; maker, William Burton. James Lyle, F.S.A.Scot., 1915.

Lamps, Candlesticks, Tinder-boxes, etc

- M G 6, 7. Candlesticks of stone, in form of Roman altars, one decorated with scissors and "goose," I.A., and dated 1634, the other found

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Cat. Ref.

- built into wall of old house at Dalkeith. James T. Gibson Craig, 1852.
- M G 10. Candlestick of wood, brass mounted, from Lady Fraser of Lovat's House, Blackfriars Wynd, Edinburgh. Mr Thomson, 1834.
- M G 40. Tinder-box with pistol-barrel of brass for tinder-box, flint-lock and handle, and side candlestick attached, inscribed MR LAUCHLAN, EDINBURGH.
- M G 202. Snuffers of iron, from West Calder.
- M G 269. Stone candlestick with four holes and heart-shaped snuff-holder in centre, found in Royal Botanic Garden, Edinburgh. Professor I. Bayley Balfour, 1898.

Locks, Keys, Door-knockers, Gratings, etc.

- M J 5. Iron lock with key, from an old house in Jackson's Close, Edinburgh. R. Bryson, 1849.
- M J 6. Iron lock with key, from Edinburgh. W. G. Davies, 1870.
- M J 7. Iron lock, small, from Cardinal Beaton's house, Cowgate, Edinburgh.
- M J 13. Padlock, large, with staple, formerly attached to "Cage" in Old Tolbooth, Edinburgh. R. Bryson, 1851.
- M J 15. Iron padlock used by officers of excise at Leith about 1700. Dr D. A. Robertson, 1849.
- M J 42. Iron lid of safe or treasure-chest of "Darien Company," instituted 1695, with complicated lock of 15 spring bolts. Directors of Bank of Scotland, 1864.
- M J 47. Key found on site of Hospital of Our Lady, Leith Wynd. Dr Daniel Wilson, 1850.
- M J 48. Key with movable ring, from Clockmakers' Land, West Bow, Edinburgh.
- M J 49. Key of old Scottish Mint, South Gray's Close, Edinburgh. Henry Forbes, 1840.
- M J 50. Key from Craigmillar Castle. Henry Forbes, 1840.
- M J 61. Key from ruins of Lord Ruthven's house, West Bow, Edinburgh. Purchased 1848.
- M J 98-100. Lanthorn and bunch of keys of Deacon Brodie, executed in 1788 at Old Tolbooth, Edinburgh, for robbing the Excise Office, then situated in Chessel's Court, Canongate. Clerks of the Justiciary Court, 1841.
- M J 103. Key found on Castle Rock, Edinburgh.
- M J 112. Tirling pin from door of old Scottish Mint, South Gray's Close, Edinburgh. Dr D. Robertson.
- M J 113. Tirling pin from Cardinal Beaton's house, Blackfriars Wynd, Edinburgh.
- M J 114. Tirling pin from old house in Leith. Dr D. Robertson, 1864.
- M J 115. Tirling pin from old house in Cowgate, Edinburgh.
- M J 116. Tirling pin from Preston House, Midlothian. Dr D. M. Moir, 1849.
- M J 126. Knocker from old house in High Street, Edinburgh. James Drummond, 1862.
- M J 168, 169. Iron yett or gate, 5 ft. 4 in. x 35 in., and window grating 3 ft. 9 in. x 2 ft. 8 in., from Haddo's Hole, Old St Giles's Church, Edinburgh. Sir W. Gibson Craig, 1861.
- M J 170. Iron knocker from door of old house in Blackfriars Wynd, Edinburgh. Miss Drummond, 1890.

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Cat. Ref.

- M J 171. 172. Large padlock and key of the dead safe of Corstorphine Church. Hay Downie, 1893.
 M J 175. Iron tirling pin with portion of the door of the house of Mary of Guise. Professor Duns, 1897.
 M J 178. Iron door sneek with lever in the top of the handle, from a house in Jackson's Close, Ediubnrgh. Purchased 1902.
 M J 179. Doorknocker of brass, formerly belonging to the office of the Northern Lighthouses. Bequeathed by Sheriff Thoms.
 M J 181. Plain iron key from old house in Edinburgh. Duns Collection. Purchased 1903.
 M J 183. Large padlock and key from Corstorphine. Rev. R. K. D. Horne, 1906.

Spurs. Bridles. Horse-trappings, etc.

- M L 84. Lady's stirrup, from Gorgie. H. D. Smith, 1905.

Distaffs. Spindles. Spinning-wheels. Looms, etc.

- M N 17. Spindle, 10 in. long, with whorl 2 in. in diameter, used by mother of donor, from West Calder. Thomas Bryce, 1855.
 M N 46. Old loom for weaving waistband tape, from West Calder. Rev. George Murray, 1881.
 M N 66. Spindle, from old house in Leith, imperfect.

Tools. Implements. and Miscellaneous.

- M P 1. Mason's chisel found embedded in the masonry of a pillar in Trinity College Church, Edinburgh. Dr D. Wilson, 1849.
 M P 2. Mason's chisel found in altering fireplace in Queen Mary's Room, Edinburgh Castle, 1848. John Henderson, 1848.
 M P 3. Mason's chisel found in wall of Holyrood Chapel. H. Elder, 1828.
 M P 6. Mason's chisel from Cardinal Beaton's House, Blackfriars Wynd, Edinburgh. Daniel Hossack, 1870.
 M P 17. Axe-head of iron found embedded in Half-Moon Battery, Edinburgh Castle.
 M P 18. Axe-head of iron found in making road near Duddingston. H.M. Board of Works, 1856.
 M P 30. Mattock, found near Luggat Castle, Stow. R. Smellie, 1870.
 M P 34. Brace and bit, found under flooring of old house in West Bow, Edinburgh. James Drummond, 1849.
 M P 50. 51. Plates of two pages of "Sallust," the first work stereotyped in Edinburgh. William Tytler, 1781.
 M P 63. Standard yard-measure of City of Edinburgh, with initials of Patrick Lindsay, Dean of Guild (1726). David Laing, 1862.
 M P 65. Spring rattle of wood, used as fire-alarm in Edinburgh about beginning of nineteenth century. David Laing, 1846.
 M P 91. Stone weight (28 lbs.), with iron handle, found underneath floor of St Giles's Church. William Chambers, LL.D., 1883.
 M P 113. Scottish tally-stick, bearing date 1692, found attached to bundle of old law-papers in Council Chambers, Edinburgh. Dr Daniel Wilson, 1848.
 M P 142-145. Delicate small balances and scales, formerly in use in old Scottish Mint. J. S. Simpson, 1829, etc.
 M P 185. Spud used for cleaning wooden plough, from Loanhead.

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- Cat. Ref.
- M P 211. Curling-stone with notch on each face for the fingers, from old house in Edinburgh. Purchased 1886.
- M P 243, 244. Iron sweeps found in the rock-cut cave at Gilmerton. G. Good, 1897.
- M P 317. Hunter's horse-shoe and nails in leather case, found in Midlothian. James Lyle, 1909.
- M P 323. Knife with tapering blade, $5\frac{1}{2}$ inches in length, and handle of roe-deer horn with brass mounting on the butt, found at Musselburgh. James Lyle, F.S.A.Scot., 1912.
- M P 358. Horse-pistol bullet from battlefield of Rullion Green. J. P. Gibb, 1913.
- A W 35. Socket stone from Glencorse. Purchased 1884.
- A X 7. Sinkstone of sandstone, with perforation at each end, and dated 1671, found under the pier at Leith. William Grant, 1872.
- B B 9, 10. Upper and lower quern stones of grit, 18 in. diameter, found near Merchiston Tower, Edinburgh. James T. Douglas, 1852.
- B B 20, 21. Pot quern, $13\frac{1}{2}$ in. inside diameter, found in Warriston Close, in making Cockburn Street, Edinburgh. The Railway Directors, 1856.
- B B 41. Upper quern stone of red sandstone, 12 in. diameter, from Arniston. Robert Bryson, 1828.

Instruments of Punishment, Torture, etc.

- M R 1. "The Maiden," the instrument used for beheading criminals in Edinburgh, and by which many persons were executed, including Regent Morton in 1581, Sir John Gordon of Haddo in 1644, President Spottiswoode in 1645, Marquess of Argyll in 1661, Earl of Argyll in 1685, etc. Presented by the Lord Provost and Magistrates of Edinburgh, 1797.
- M R 2. "The Stocks," from old Canongate Tolbooth. Prison Board of Edinburgh, 1874.
- M R 5. Handcuffs used for securing Watt, one of the "Friends of the People," executed for treason at Edinburgh, 1794. Miss Walker, 1841.
- M R 6. The "gaud" or iron bar, with chain and fetters for ankles, by which criminals condemned to death were formerly secured in Old Tolbooth, Edinburgh. Edinburgh County Prison Board, 1859.
- M R 7. Iron girdle with manacle on each side, formerly used in Old Tolbooth of Edinburgh. William B. Johnstone, 1861.
- M R 8, 9. Iron fetterlocks, found in Old Tolbooth, or Heart of Midlothian, when demolished in 1817. David Moir, 1849.
- M R 10. Repentance stool, formerly used in Old Greyfriars Church, Edinburgh. Miss C. Hogarth, 1864.
- M R 11. Sackcloth or "Gown of Repentance," formerly used in Parish Church of West Calder. Rev. J. Muckersy, 1816.

Articles of Dress and Personal Use.

- N A 14, 15. Pair of soles, found in Moray Vault, under St Giles's Church, Edinburgh. A. Ritchie, 1837.
- N A 256. Jewel casket of iron with two locks, found in old house in High Street, Edinburgh.
- N A 263. Pewter button, found in Edinburgh. Andrew Kerr, 1886.

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Cat. Ref.

- N A 321. Linen cap. found in Mary of Lorraine's house. Blyth's Close, Edinburgh. T. W. Greig, 1893.
 N A 348. Brass button of the Edinburgh volunteers. A. Murray, 1901.
 N A 399. Small-toothed comb of wood, found in excavating in Leith Walk. Purchased 1912.

Mould for Buckles.

- B G 34. Stone mould for buckles. from Dalkeith. John Gray, 1853.

Badges, Insignia, Uniforms, etc.

- N C 1. Leather cap. mounted with velvet, found behind wood lining in old apartment in Holyrood Palace. James Ritchie, 1830.
 N C 2. Cap worn by Sir Walter Scott when trooper in Midlothian Volunteer Yeomanry. William Trotter, 1833.
 N C 3. Old Edinburgh fireman's helmet of leather, lined with iron, and having the city arms on front, 1720. Fletcher Yetts, 1806.
 N C 4. Uniform tunic of First Regiment of Edinburgh Volunteers, raised in 1803 and finally disbanded in 1822.
 N C 5-7. Embroidered uniform coat and two cocked hats. formerly worn by Old Town Guard. Edinburgh Town Council.
 N C 10, 11. Academic gown and cap worn by Alexander Henderson, A.M., minister of Edinburgh, when Rector of University (1640-1646).
 N C 12-13. Two flat black cloth bonnets, used by doctors in seventeenth century. Senatus Academicus of Edinburgh University, 1862.
 N C 15-19. Insignia of Cape Club (a convivial society founded in 1793 and dissolved in 1843). viz.—(15, 16) large steel poker; (17) cap of crimson silk velvet; (18) member's diploma; (19) painted panel with insignia of club.
 N C 20-27. Insignia of the constables of the Barony of the Calton, Edinburgh, viz.—(20-24) painted and silver-mounted batons; (25) silver-mounted snuff-horn, with moderators' medals attached; (26) marble punch-bowl; (27) document presenting the insignia, framed and glazed. Presented by members on extinction of Barony of Calton, 1856.
 N C 33. Badge with the arms of the city of Edinburgh. the initials A.G., and the date 1719.
 N C 34, 35. Badges of the Second Midlothian Volunteers, 1798 and 1860. John McGowan, 1861.
 N C 58. Plate of insurance society, from John Knox's House. Netherbow, Edinburgh. Dr J. A. Smith, 1861.
 N C 59. Old clappers or hand-bells formerly used by town crier of Edinburgh. W. McFarlane, 1798.
 N C 63. Table of fares and cab-driver's badge as used in Edinburgh at

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- N C 81, 82. Two metal insurance plates, Caledonian and North British, from Edinburgh houses. C. S. Davidson, 1895.
- N C 87. Bronze military cap-badge found at Juniper Green. Messrs William Cowie & Son, 1898.
- N C 91. Gold-headed stick, being the staff of office of Neil Macvicar, Provost of Edinburgh in 1802. Bequeathed by Dr John Fortune, 1902.
- N C 95. Long baton of painted wood of Dalkeith Constabulary, 1845. A. W. Lyons, 1903.
- N C 99. Pewter badge of John Hunter, town porter, with City of Edinburgh arms, and Number 888. Purchased 1907.
- N C 110. Beggar's badge, Parish of Calderclere, West Calder. Purchased 1913.
- N C 112. Helmet of brass, Royal Midlothian Yeomanry Cavalry. Walter Symons, Gilmerton, Midlothian, 1913.
- N C 113-117. Undress uniform of Royal Midlothian Cavalry—(113-114) two jackets: (115, 116) two caps: (117) one pair trousers. Dr W. G. Aitchison Robertson, F.S.A. Scot., 1913.

Chains, etc.

- N G 100. Chain of gold for neck, with oval links, found in Holyrood Park. Treasure Trove, 1859.

Finger-rings. Ear-rings, etc.

- N J 8. Hoop-ring, gold, inscribed JASPAR · MELCHIOR · BALTAZAR, found on Castle Hill, Edinburgh. Mrs John Scott, 1865.
- N J 11. Hoop-ring, gold, inscribed QUHAIR THIS I GIVE I WISS TO LIVE, found in Edinburgh. Purchased 1880.
- N J 19. Broad brass ring, $\frac{3}{4}$ in. in diameter, and $\frac{5}{8}$ in. broad, inscribed in Anglo-Saxon runes, found in Cramond Churchyard. Rev. Dr Colvin, 1870.
- N J 38. Prayer-ring of bone, dug up in Inveresk Churchyard. Dr Daniel Wilson, 1863.
- N J 63. Finger-ring of copper, flat, with buckle device, found at Liberton. Purchased 1905.
- N J 68. Finger-ring, stirrup-shaped, of solid gold, having a square bezel in which is set a natural octohedral crystal of oriental diamond; the gold setting is bevelled off to the planes of the facets of the crystal: weight, 14·154 grms.: interior diameters, 1·9×1·7 cm.; found in the garden of the Palace of Holyrood; probably of 14th-century date. Acquired through the King's Remembrancer, 1917.

Watches. Clocks. Compasses, etc.

- N L 2. Silver, double-cased watch by Roumieu, Edinburgh, with pinchbeck triple chain and swivel seal with antique head. Charles Brand, 1862.
- N L 7. Pinchbeck watch with enamelled back, by "J. Cleland, Edinburgh." Mrs Henry Ziegler, 1876.

Seals and Stamps.

- N M 18. Matrix of seal of hospital of St Anthony, near Leith. St Anthony with pig and tau-staff, S · COMUNE · PRECEPTOIRE ·

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- SANCTI · ANTHONII · PROPE · LEICHT. Advocates' Collection. Purchased 1874.
- N M 27. Brass matrix, burgh of Canongate—S'COIE · BVRGI · VICE CANONICOR · MONASTERII · SANCTE CRVC,—found in citadel, Leith. John Tingman, 1863.
- N M 28. Copper matrix of seal of burgh of Canongate—S · BURGI · VICI CANONICORVM MONASTERII SANCTE CRVCIS. Charles Watson, 1878.
- N M 51. Seal, with turbaned head and Hebrew inscription. found on Arthur's Seat, Edinburgh. Dr D. Wilson, 1852.
- N M 54. Seal of Old Edinburgh and Dalkeith Railway. Edward Burns, 1888.
- N M 64. Seal of AERNAVD LAMMIVS. found in Parliament Square, Edinburgh. Andrew Grieve, 1833.
- N M 83. Seal of "Friendly," the first Insurance Society in Scotland, established 1727. W. Swanson, 1852.
- N M 117. Brass seal, circular, of Canongate, with wooden handle, stag's head, with cross between antlers. SIC ITUR AD ASTRA. R. N. Inches, 1890.
- N M 145. Cast in silver, 2½ in. diameter, of the Seal of the Barony of Portsburgh, showing a three-towered castle on a rock, and inscribed SIGILLVM BVRGI DE EDINBVRGH BARONIE SVE DE PORTSBVRGH. A. J. S. Brook, 1900.
- N M 155. Papal bulla of lead, of date *circa* 1460-70, found in Warrender Park, Edinburgh. Purchased 1908.
- N M 159. Leaden seal, 1½ in. in diameter, *obv.* SIGILLVM · LEPROSORVM and a bust within a circle in centre; *rev.* S · LAZARI · IHERVSALEM with a bust of a bishop with right hand raised in act of blessing, found under an old house near Holyrood. W. Moir Bryce, F.S.A. Scot., 1913.
- N M 162. Matrix of the seal of Trinity College Church, Edinburgh, bronze, vesica-shaped, measuring 2½ in. × 1½ in.; engraved with a representation of the north side of the church, above it are the words SCTA · TRINITAS · UNUS · DEUS · amid flame-shaped rays of glory; beneath is a shield ensigned with an arched crown, bearing impaled arms: *Dexter* a lion rampant within a royal tressure (Scotland); *Sinister* two lions combatant (Gueldres); legend S. ECCCLIA : COLLEGIATA : SANCTA TRINITATIS PROPE EDIBURG; outer border cabled: inscribed on back D | MRP | 1574 (Dominus Magister Robertus Pont): a ridge rising lengthwise from the back, perforated near the middle, forms a handle. See Laing, ii., No. 1139. Purchased 1913.

Charms, Amulets, etc.

- N O 22. Calf's heart stuck full of pins, which had been used as a charm in witchcraft, found in old house in Dalkeith. James Bowd, 1827.

Tobacco-pipes, Snuff-boxes, etc.

- N Q 47. Tobacco-box with maltmen's arms, and inscribed JAMES CRAFOORD. MALTMAN. LEITH, 1737.
- N Q 70. Pipe-head of clay from Watson's Hospital.
- N Q 131, 132. Pipe-heads of clay from Leith.

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- Cat. Ref.
 N Q 160. "Elfin" pipes from Bonnington and Chapperton Hall, Midlothian. Purchased 1888.
 N Q 198. "Elfin" tobacco pipe-bowls from debris at the old chapel, Restalrig. Rev. W. Burnett, 1909.

Miscellaneous Articles.

- N T 13. Private sedan chair, used in Edinburgh till 1830. Professor Sir J. Y. Simpson, 1861.
 N T 14. Royal Arms and supporters in sewed work, time of Charles I., from Council Chambers, Edinburgh.
 N T 15-17. Small oaken chest, and two plates of pewter, bearing stamp of corporation of pewterers of Edinburgh, from 1600 to 1760. James Huie, 1870.
 N T 27, 28. Copper tablets, bearing inscriptions, taken from the foundations of the Leith Docks.
 N T 86. Collection of eight "Liliputian" coffins with their lids, containing carved wooden figures in grave-clothes: part of a hoard of seventeen such coffins found in a rocky cleft on Arthur's Seat in 1836. Mrs Couper, Tynron Manse, 1901.
 N T 88. Fancy box, $7\frac{3}{8} \times 5 \times 1\frac{7}{8}$ in., made by French prisoners in Edinburgh Castle. Purchased 1905.

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